

## **Part 3: Looking Back**

*While in Part 1 I laid out the mechanics of money-credit-debt-markets-economics and in Part 2 I showed the archetypical sequence that led to central governments and central banks to go broke, in this part I show what happened over the last 80 years so that you can see how it aligned with the template and use that review of history as a foundation for looking ahead which will be done in Part 4. I believe that what is covered in this part will give you an interesting and valuable unconventional perspective of what happened and why that will be a foundation for thinking about what will happen. It will certainly provide you food for thought and debate.*

## Chapter 8: An Overview of What Has Happened Since 1944

I will now look at what happened over the 80 years since 1944, which is when the new world order and the new monetary order came into existence. Regarding the five big forces, while my focus will primarily be on 1) the debt/money/economic force, I will also describe 2) the internal order and political cycle that goes with it (i.e., the political left versus political right cycle), 3) the international order and geopolitical cycle that goes with it (i.e., the great powers conflicts), 4) the acts of nature forces (droughts, floods, and pandemics), and 5) humanity's advances, especially through technology, because these forces are so intertwined that they can't be understood separately. I urge you to observe how they together produced the big swings and evolutionary changes that took us from 1944 until now.

Of course, this is a very brief description of what happened in a limited number of countries with an emphasis on the most important developments in the countries that were "important" in shaping the changes in the world monetary and geopolitical order. Because US money, credit/debt and other forces were so dominant, naturally the US and its money and credit played the biggest role in shaping this period, hence also in shaping my description of this period. Still, these same five forces were the major forces that drove what happened in all countries in the same basic ways.<sup>1</sup>

Once again, if you don't want to read all that I have here and instead want to skim it, I suggest that you just read what is in bold.

### The Past Is Prologue: How to Look at It

To begin, I want to share two of my principles with you that are relevant to how I am approaching this study.

- **If you want to see how and why big events have unfolded, be careful not to focus precisely on small events and not to lose sight of how and why the big things are changing. People who try to see things up close and precisely typically miss the most important things because they are preoccupied with looking for precision. Also, if you look at things up close, you will never see the most important big things. So, when looking for the big things, pay attention to the big things.**
- **Everything that happens does so for reasons that make it happen, so we should strive to understand and explain the cause/effect relationships that drive changes and create from them a logical template-model that both explains past changes and aligns the template-model with what is actually happening and, if there are discrepancies, work to understand and resolve them. This template-model should be timeless and universal, meaning that it should explain all the big important developments in all time frames and in all countries, though not necessarily precisely or in detail. If it fails to explain all the big developments in all time frames and countries, that indicates that an important influence is missing and needs to be added to the model.**

What I am saying is that in the most fundamental ways, the previously described processes and cycles have happened in all countries over all time similarly, though none of them have been exactly the same. So, to see the processes and cycles, you need to pay attention to the biggest, most important changes that happened, keeping in mind the reasons for the big changes and the big differences.

In one sentence what I am saying is that what has timelessly and universally (i.e., throughout the millennia and across countries) driven the Big Debt Cycle changes and has created the big debt and economic problems is the creation of unsustainably large amounts of debt assets and debt liabilities relative to the amounts of money, goods, services, and investment assets in existence. This always has and inevitably will always lead to big debt

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If you are interested in looking at many more cases over many more years, I suggest you look at my book *Principles for Navigating Big Debt Crises*, which examines 48 big debt crisis cases over the last 100 years, and at *Principles for Dealing with the Changing World Order*, which examines many cases affected by many influences over the last 500 years. You can also see updated measures of the current conditions and the world as a whole in my [Great Powers Index](#).

crises and “runs” on banks. By a “run” I mean a turning in of debt assets (that have no intrinsic value—i.e., their only value is to buy things) to “banks” in order to get real money, which the bank doesn’t have enough of to meet the demand, so the bank either defaults, or in the case of central banks with fiat monetary systems, “prints” fiat money. Classically, when the holders of those financial assets actually try to convert them back into money and buy things and see that they can’t get the buying power they believe they have stored in their debt assets, the run accelerates which causes the “run on the bank” that feeds on itself which causes great shifts in markets’ values and wealth until debts are defaulted on, restructured and/or monetized, reducing the debt burdens relative to incomes, and a new equilibrium is reached. The debts are almost always monetized, by which I mean that it is almost always the case that the central bank creates a lot of money and credit to make it easier to pay back the debt, which devalues the money and debt.

**There are variations in how each of these cases plays out. However, during these times, we almost always see that it becomes relatively undesirable to hold the debt assets (i.e., bonds) for long relative to holding other storeholds, such as equities and gold, which don’t lose buying power when the value of money goes down.<sup>2</sup>**

You could miss this if you pay too much attention to exactly how banks and central banks have worked, especially if you don’t look at them over time or across countries. For example, while it’s true that long ago there weren’t central banks like there are today, central banks work in essentially the same way as non-central banks except central banks can print money. So, the debt dynamic with them works essentially the same way for central banks as private banks except that, when there is a debt crisis, the central banks can print money. Similarly, while the debt dynamic works essentially the same way across countries, in countries that have well-established reserve currencies, the borrowers and lenders are more inclined to have confidence in them so there is more stability. To see how the debt dynamic works, it would also be a mistake to overly focus on how it is now working without keeping in mind how the debt cycle evolves over time. For example, if I didn’t know how central banks (especially the Fed) used quantitative easing when they needed to ease and interest rates hit 0%, even though that never happened before in my lifetime, I wouldn’t have known what they could do and did in 2008. Similarly, throughout history, most central banks have switched from having a linked/backed currency (e.g., a gold-backed currency) to having a fiat currency (allowing them to freely create money) when they had too many debt assets and liabilities relative to the currency it was supposed to be backed by, and they have tended to switch back to a fixed/linked currency when they abused the fiat currency system by printing too much currency, which created too much depreciation of its value for it to be an effective storehold of wealth. I am confident that to understand what is happening and what is likely to happen, you must keep in mind the big changes that happened in history and the cause/effect relationships that drove them—i.e., you must understand how “the machine” works—and not get hung up with trying to be precise with the little stuff or focusing too exactly on what is happening now.

To emphasize the importance of the big things, I describe things in a simplified way, so it’s easy for some people to say, “That’s not exactly right!” and be correct. I am intentionally conveying this template-model in a not exact way in order to draw attention to the most important things.

While I will now explain how I believe the cyclical debt/money/economic dynamic that I previously described has transpired since it began in 1944, I want to re-emphasize that this dynamic isn’t specific to the last 80 years. The big cycle dynamic that I am describing, and that we are now in, is working in the same basic way as past cycles have worked for thousands of years in all countries—i.e., it has been driven by the same basic and logical cause/effect relationships that you will see if you don’t squint at the details.

Let’s now look at what happened since the end of World War II when the new world order began. While I will be putting what happened in the context of the Big Debt Cycle, you will see that the other four forces also swung greatly and interacted with the debt cycles to shape what happened. You will see all five forces ebb and flow like waves, sometimes small ones and sometimes big ones, sometimes reinforcing each other and sometimes negating each other, and sometimes with big ones coming together to create perfect storms. As for the debt cycle force, to repeat, the main thing to keep in mind is:

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<sup>2</sup> While the prices of risk-free debt will go up as interest rates go down, when central banks are stimulative and these default-free assets have appeal, interest rates will eventually become too low and debt assets will cease to be attractive.

- Normally, when central banks want to be stimulative, they lower interest rates and/or create a lot more money and credit, which creates a lot more spending and debt. This stimulation both extends the expansion phase of the cycle and raises debt assets and liabilities relative to incomes, which makes the debt asset and debt liability balance more precarious. History shows us that when central banks can't lower interest rates anymore and want to be stimulative, they print money and buy debt, especially government debt. That gives debtors, most importantly governments, money and credit to prevent them from defaulting and allows them to continue to borrow to spend more than they are earning until the debt assets and liabilities become too great to balance, which is when a debt restructuring and/or debt monetization must occur.

## What Happened Since 1944

I am now going to take you through the Big Debt Cycle that began in 1944, which we are now in the late stages of, and explain how it transpired as a function of the earlier described mechanical cause/effect relationships.

In reviewing what happened relative to this template, I will go beyond the major debt/money/economic events to include the major events that arose from the other four big forces because all of these five forces were so entwined that it is impossible see them separately. As we go through this period to the present, please note the big swings in all five of these influences and how they affected each other.

To make clear how it transpired relative to the previously explained money/debt template, I will divide the post-1944 period into four phases signifying the four main monetary regimes that drove the credit-debt dynamic since 1944. We will begin in 1944 because that is when the new monetary, geopolitical, and in many cases, domestic political orders began.

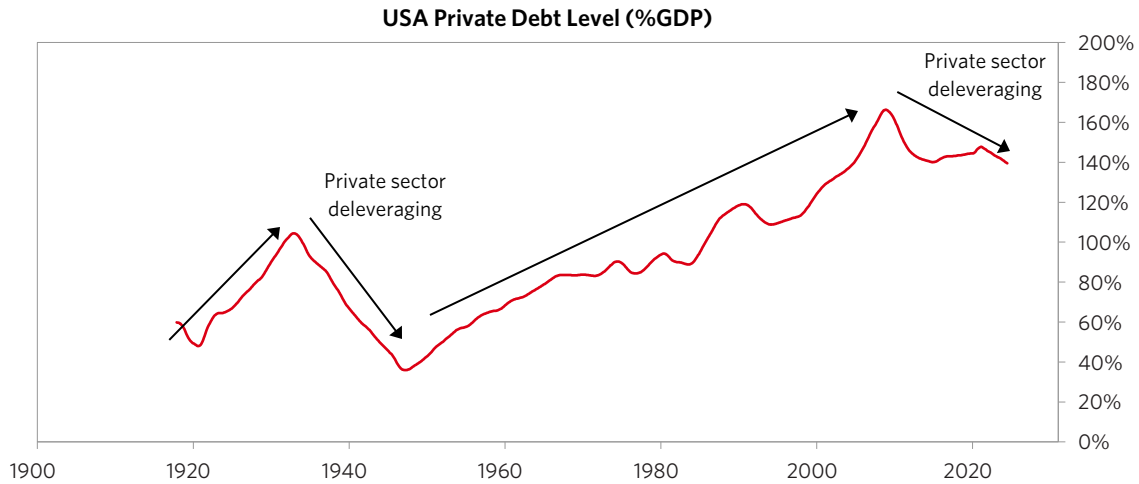
Because I was born in 1949 and have been a global macro investor for most of my life, I both experienced and studied most of what I am going to describe, so I am going to share some personal descriptions to help enrich the picture and pass along some lessons that I learned from going through these experiences, especially through my painful mistakes, which stick in my mind much more than my winning decisions. As you watch the story of the last 80 years unfold, observe the almost in-unison swings in the five forces from one extreme to another. Note that they were so extreme that each decade was more likely to be more opposite than similar to the decade before it, yet at the end of each, the psychology and markets expected more of the same, so those were the key times to understand the fundamentals well and bet against the crowd on the unexpected developments that were logically probable.

### The Current Big Debt Cycle in Brief

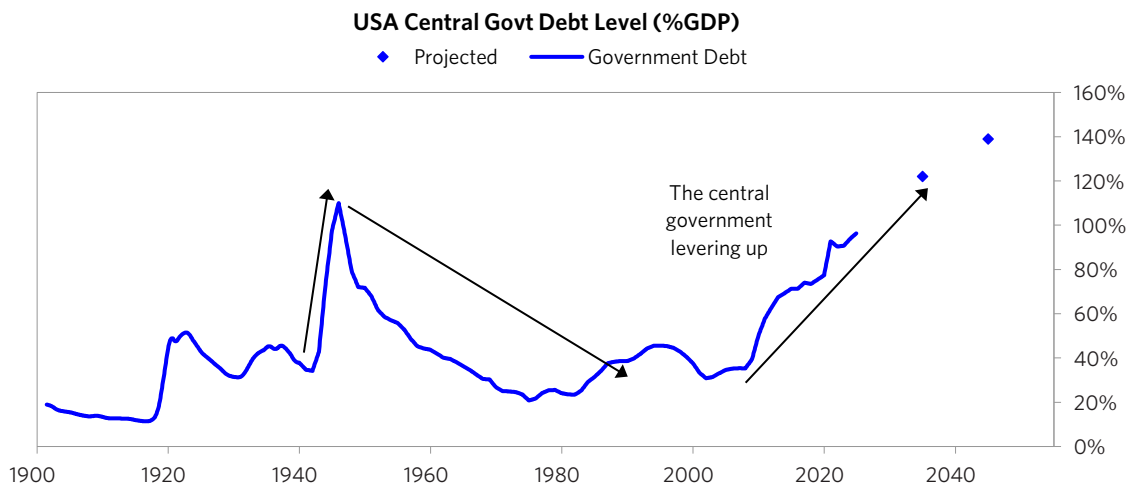
Before I get into what happened, I'd like to show you the Big Debt Cycle in few charts, starting at 1900 with the United States. Showing this whole 1900 period will give you a greater perspective. I have focused on the US dollar debt charts because the world money and debt market has been a US dollar debt market during this Big Cycle, even though it is the case that other countries have also had their own big cycles.

In the US, from 1944 to 2024 there were 12.5 short-term debt cycles (i.e., at this writing we are about halfway through the 13th) that averaged about six years in length and added up to one Big Debt Cycle that brought the central government's debt-to-income ratios up and worsened the central bank's balance sheet in the ways shown in the charts below. Said differently, the US and its credit markets have been in the long-term leveraging-up phase of the long-term debt cycle, and they haven't yet entered the deleveraging part of the long-term debt cycle, though there have been some brief deleveragings along the way. These charts show the big picture. Most people overlook this big-picture arc because they are focused on the short-term wiggles, which don't even show up in these charts.

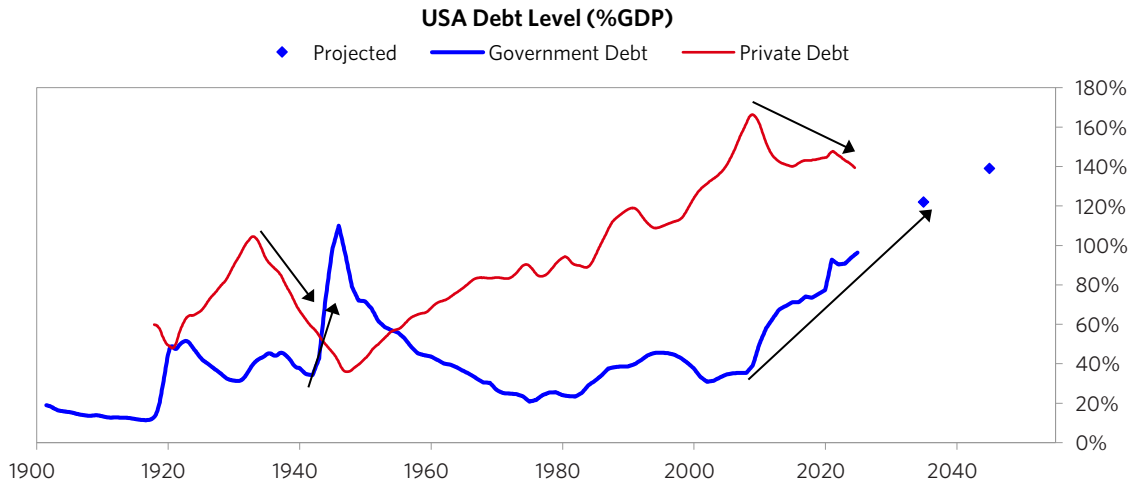
This first chart shows US private debt relative to GDP since 1900. This Big Debt Cycle beginning in 1944 is obvious. Note the peak in 2008 and the slight decline since then. The decline happened as the US central government and US central bank stepped in in a big way to help the private sector, which is shown in the next two charts. As previously explained, this is typical of the beginning of the late stage of the Big Cycle.



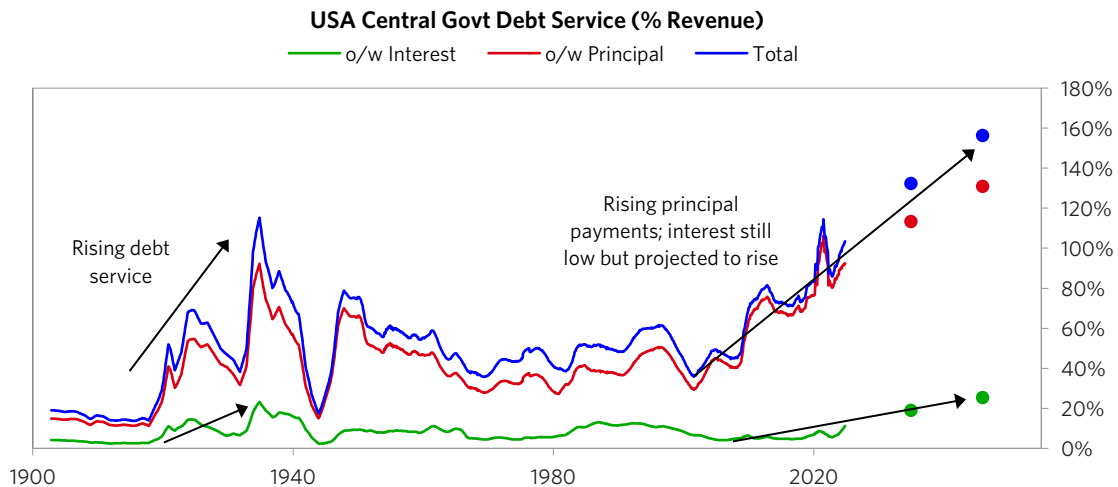
The chart below shows US government debt relative to GDP, with the dots signifying projections by the Congressional Budget Office in 10 and 20 years. As shown, it is evolving in a big cycle, is now at the highest level since 1946 (around the end of World War II), and is projected to be much higher in the future.



Now I will put the last two charts into one chart so you can see how they relate to each other. You can see how private and public sector debt levels have been related: most importantly how the government tended to acquire more debt when the private sector was acquiring less. For example, you can see how the government's debt as a share of GDP has increased dramatically since 2008, while the private sector's debt-to-GDP went down. That is because in order to provide the private sector with more support, the central government got itself into more debt. Therein lies the problem.



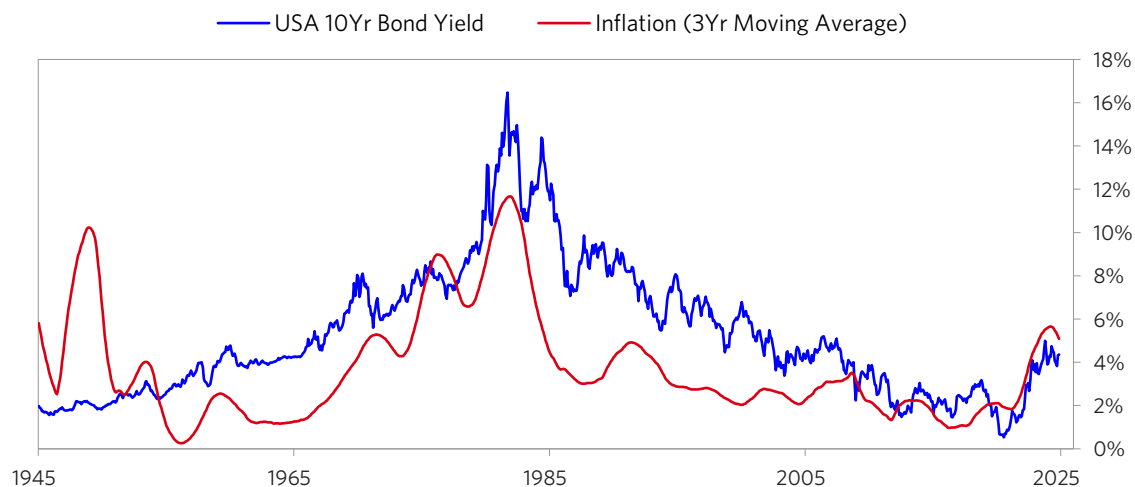
The next chart shows the central government debt service as a percent of the money it takes in. As shown, it is now at about 100% and it is projected to rise to about 150% in 15 years. To visualize what that means, imagine that the amount of money you had to pay in debt service each year was 50% greater than you earned each year. It's unimaginable. So, what is the belief that is behind how that situation will work? It is the belief that the government will be able to 1) roll over the debt that is coming due, 2) sell the new debt that it needs to borrow to fund the deficit, and 3) have holders of the existing debt not sell it (i.e., that those who are lending to the government decide that they want to continue lending to the government because it's not too risky).



**Because everything that happens does so because of reasons that make it happen, if one looks and thinks about them, one can see indicators of the cause/effect relationships, see them unfolding, and use them as indicators of what is likely to happen. To help paint the picture I will pass along a few more of these.**

**The next chart shows the 10-year Treasury bond rate and a three-year moving average of the inflation rate. The relationship between interest rates and inflation rates is important because when interest rates are high relative to the inflation rate there is an incentive to save and earn the interest rate, and when interest rates are low relative to the inflation rate there is an incentive to borrow and hold assets that benefit from inflation and the growth that low interest rates foster.**

In the chart below, you can see the big cycles of interest rates reflected in the 10-year Treasury bond yield and a three-year moving average of the inflation rate. The bond yield consists of two parts—the expected inflation rate and the expected real bond yield. Both are important in affecting the value of money and debt as a storehold of wealth and as a cost of funds. Note that on the upswing of this big cycle, all short-term cyclical swings in bond yields (i.e., those that took place in the cycles of recessions, stimulations, strong growth, and rising inflation periods that led to tightening money and credit that then led to recessions and falling bond yields) and all the cyclical declines in bond yields were higher than the ones before them until 1981. Also note that each of the short-term cyclical swings in bond yields from 1981 until 2020 were lower than the ones before until nominal interest rates nearly hit 0% and real interest rates were significantly negative. That reflects the big cycle in inflation expectations and the real interest rates' movements around these expectations. While nominal interest rates are important, real interest rates are even more important because that is an indicator of the attractiveness of Treasury bonds as a storehold of wealth.

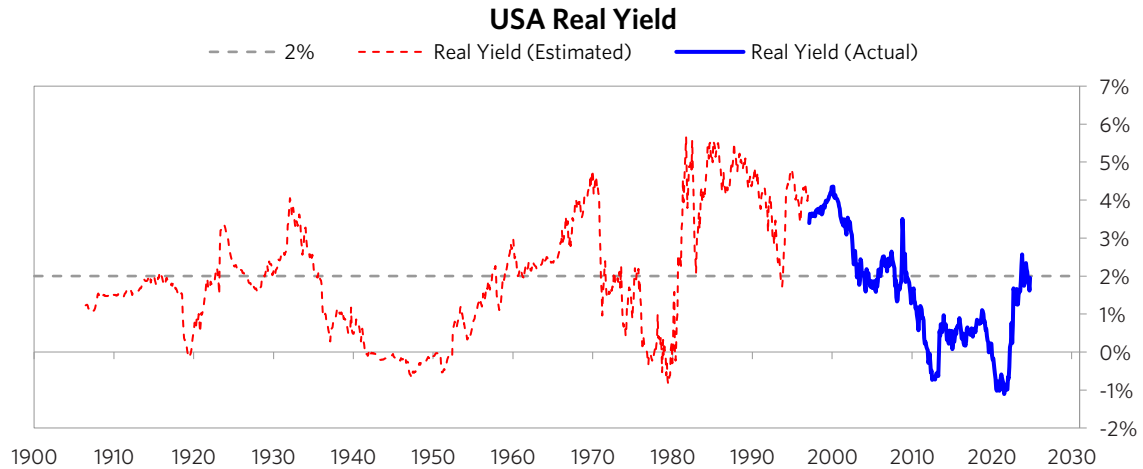


In the chart below you can see the real 10-year bond yield. In years after 1997, I am using the real yield on a 10-year Treasury inflation-protected bond.<sup>3</sup> In my opinion, the real bond yield is the most important number to watch in the financial world. That is because it shows what real return you can certainly get (i.e., free of inflation risk and default risk) on your wealth,<sup>4</sup> which is the most foundational rate for all capital markets. To earn more than that rate, one has to earn it through cleverness. Even more importantly, **it is the best single indicator of whether it is better to be a borrower-debtor or a lender-creditor**—e.g., when real interest rates are low, it is much easier to borrow money and convert it into profits than when real interest rates are high. As such, it is a great tool for central banks to use to modulate credit and economic activity. As shown, the real bond yield has averaged about 2% over the last 100 years, which is a rate that is neither too low for borrower-debtors nor too high for lender-creditors. The period of great differences from this 2% were periods of excessively cheap or excessively expensive credit/debt that contributed greatly to the big swings in the Big Debt Cycle.

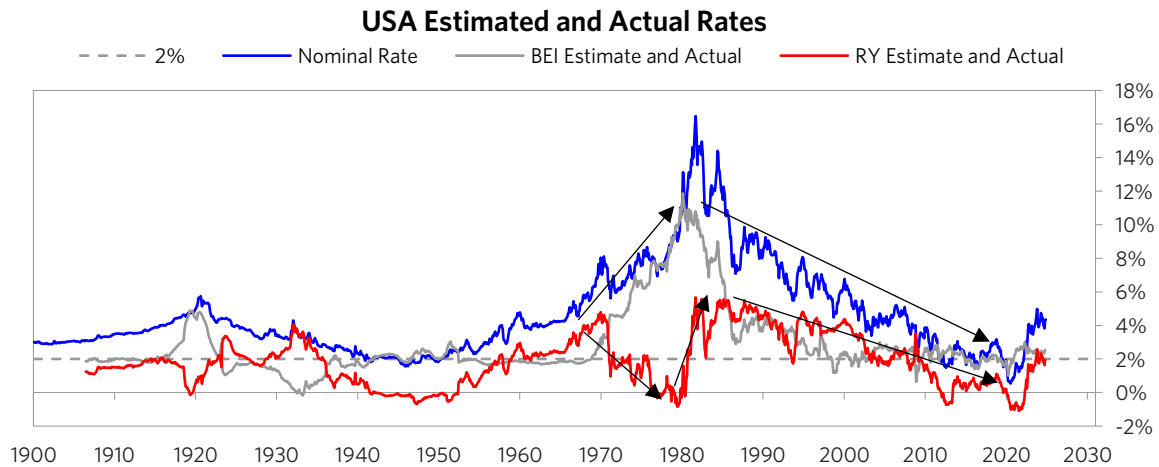
<sup>3</sup> In the years prior to 1997, I am estimating the real bond yield based on the nominal yield and an estimate of market 10-year inflation expectations

<sup>4</sup> If it were free of tax risk, it would be a perfect estimation of the real return you can certainly get.





When looking at nominal bond yields relative to inflation-indexed bonds' real yields, I can also see the breakeven inflation rate, which is the inflation rate that the market is betting on. Since one can make money betting against that rate if one thinks inflation is higher or lower than the market believes, and the markets are pretty tough to beat, one can use that inflation rate as a pretty good naïve estimate if one doesn't have a market-beating way to make a better estimate. Because I can see in the market pricing both the "discounted" (i.e., market expected) inflation rate and the discounted real interest rate that I can lock in, I see the bond yield and price as consisting of these two important drivers. I am always watching them rather than just the Treasury bond interest rate, and I often think of and trade the two pieces—i.e., the inflation rate and the real interest rate—separately. Their past estimated pricing is shown below.

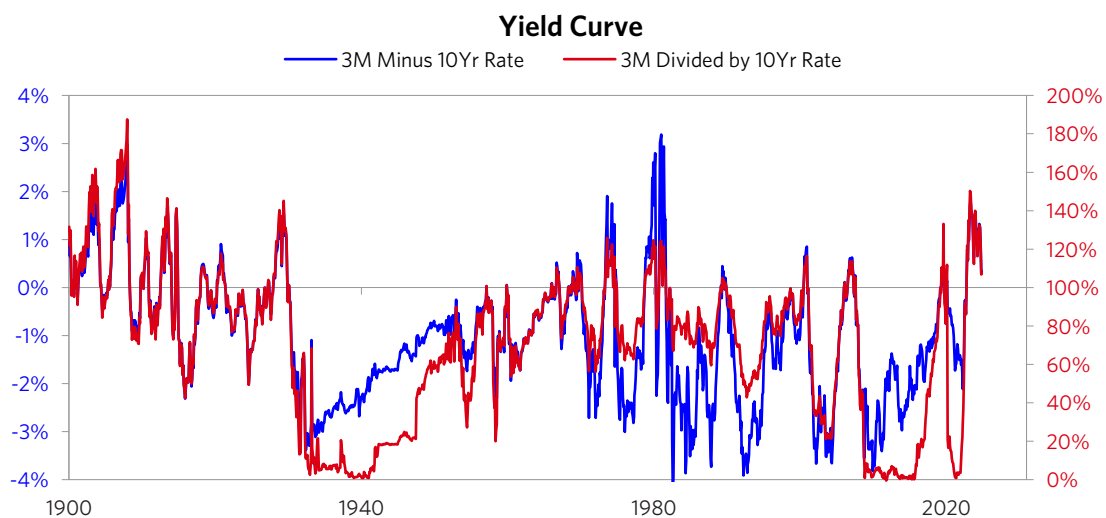


**I always think about the 10-year real rate and its two parts because it is the most important governor of all capital markets.** I have been intimately involved with it for a long time. For several years, when there wasn't an inflation-indexed bond market in the US, I invested in non-US inflation-indexed bonds that I currency-hedged to create a synthetic equivalent of a US inflation-indexed bond. That came about because a great investor, David White of the Rockefeller Foundation, explained that he had to give away 5% a year and asked me what I thought was the surest way of investing to fund that, which prompted me to think about leveraging and hedging foreign inflation-indexed bonds. That led Bridgewater to become the largest global inflation-indexed bond manager in the world, and I was invited to work on the design of the Treasury Inflation Protected (TIPS) bond market with Larry Summers when he

ran the US Treasury. Since then, we have had a real market showing real bond yields to both look at for guidance and to invest in, which has been foundational to all my investment thinking. I believe that the inflation-indexed bond markets that exist around the world are much underappreciated and underused relative to their potential, for the reasons I just explained. I recommend that you watch them as indicators and use them as storeholds of wealth.

**The relationship between short-term rates and long-term rates (i.e., the yield curve) is also very important because when short-term interest rates are high relative to long-term rates that indicates money is tight and encourages the holding and lending of cash, which becomes more attractive than borrowing and investing in other investments.** Movements in the attractiveness of different assets affect the nominal interest rate yield curve—i.e., the difference between the 10-year nominal bond yield and the nominal short rate<sup>5</sup>—reflecting the changing tightness of money and the changing incentives to hold cash relative to bonds.<sup>6</sup> That is because normally a higher interest rate is required by lender-creditors to hold longer-term debt and because higher long-term interest rates than cash rates provide a reward-inducement for lending. When the central bank wants to slow credit growth and economic demand it raises short-term rates relative to long-term rates, and when it wants to stimulate it does the opposite. When both 1) real yields are high and 2) the yield curve is nearly flat or inverted, money and credit are tight, which is typically a good environment for lender-creditors and a bad environment for borrower-debtors, and when 3) real yields are low and 4) the yield curve is relatively positive, that is typically a good environment for borrower-debtors and a bad environment for lender-creditors. When central banks shift these things extremely that leads to extremely good and bad environments and a lot of volatility for both borrower-debtors and lender-creditors, which is also disruptive to economies and causes pain and inefficiencies.

**I think that the Fed should not be as extreme and volatile as it has been in its use of interest rates to influence monetary policy. If I were running monetary policy, my goal would be to keep the long-term real interest rate relatively stable at a rate that balances the needs of both borrower-debtors and lender-creditors and doesn't contribute to making the debt bubbles and busts. That would mean seeking to have the real T-bond yield around 2%, varying that target by something like 1%, and targeting the yield curve slope so that a) the short-term rate is about 1% below the long-term rate and b) the short-term rate divided by the long-term rate is about 70%, give or take about 2% and about 50% respectively.**



**Setting policy in a way that produces fewer big and volatile swings in real interest rates and yield curves would lead to less volatility. In turn, that would lead to less harm to borrower-debtors and lender-creditors (and everything else they affect in the economy), and it would allow them to plan better.** In other words, with a more

<sup>5</sup> I look at both the short rate minus the long rate and the short rate divided by the long rate as measures of the yield curve for reasons I won't digress into.

<sup>6</sup> The yield curve was typically upward-sloping, with short rates about 1% below long rates and 70% of long rates.

consistent policy, borrower-debtors and lender-creditors would both know that they could expect a reasonable real rate, which should be acceptable to both of them so they could plan their activities accordingly. With that relatively certain borrowing rate, lending and economic conditions would adapt to that reasonable interest rate. Also, setting that rate would help provide both borrowers and lenders more stable cost-of-funds and real returns, which would make for more stable capital markets and yield more stable economic conditions, which would improve efficiencies that would enhance the running of capital markets and the economy. But let's get back to exploring rates and how they impact the economy.

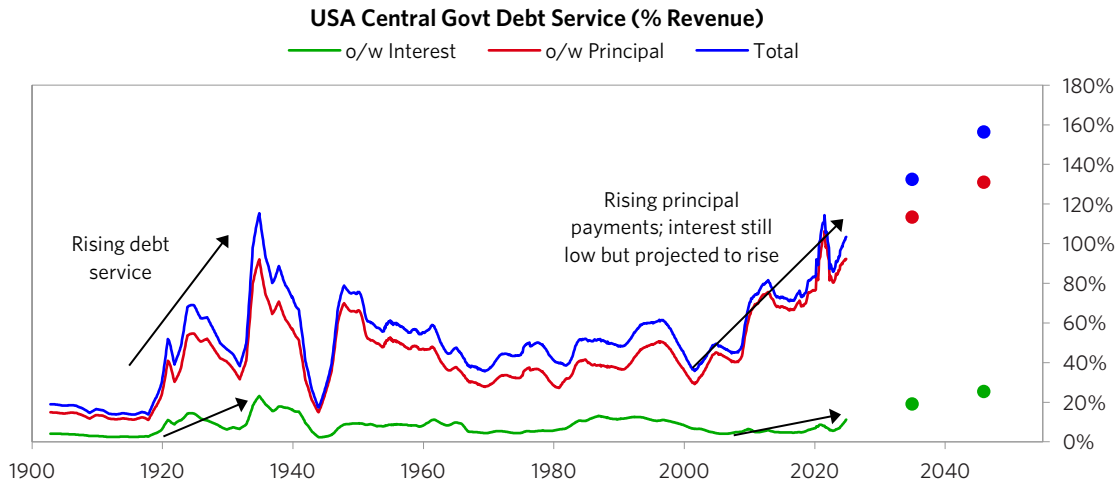
**Thus far I have just shown you the big picture of the Treasury interest rate, but that isn't the rate that people, companies, and local governments borrow at. For that reason, watching credit spreads is helpful. Below is a chart that shows an average credit spread (for Baa corporate bonds) since 1920.**



**The amount of interest owed on a debt is determined by the amount borrowed and the interest rate, which, together with the amount of principal to be paid back, is the amount of debt service.**

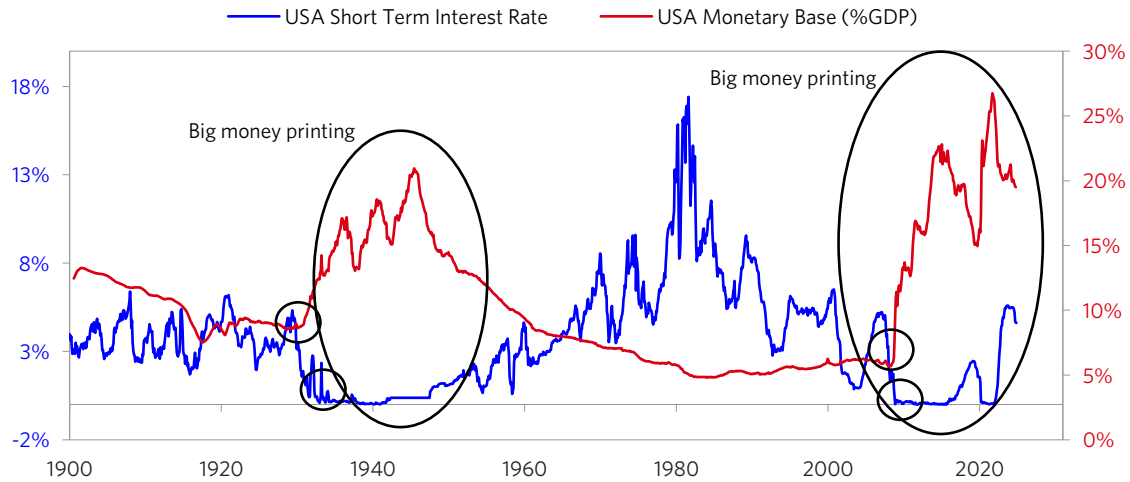
**Let's revisit the chart shared earlier that shows total debt service (principal payments plus interest payments) for the US central government relative to its revenues and how much of that comes from principal payments and how much comes from interest payments.** Note that debt service was roughly flat from 1950 to 2000; that is because government debt levels were roughly flat or falling slightly over that period, so principal payments were also roughly flat to slightly falling. Interest payments rose slightly from 1950 to 1990, as the average interest rate on government debt slowly rose, then fell from 1990 to roughly 2022, as the average interest rate on government debt slowly fell.

I am using dots to show how this is projected to grow, based on the CBO's estimates, over the next 10 and 20 years. The projected picture is very different from the recent past, because the central government's debt levels are high and projected to rise fast, and the effective interest rate on these high debts is also projected to rise, which will cause a big increase in government debt service relative to government revenue, which produces a significant squeeze on spending unless there is a lot more borrowing, most likely financed by the central bank. Therein lies the problem.

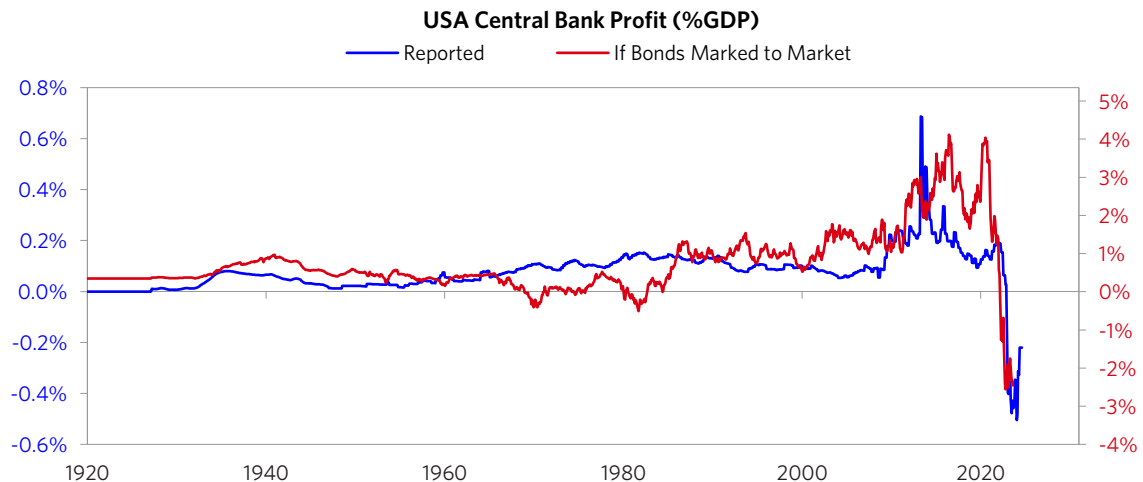


Who did the central government borrow the money from? It borrowed a lot of it from the central bank. It also borrowed a lot from commercial banks and foreign investors who lost money when interest rates rose. About one-third of it is from foreigners. These commercial and foreign buyers/holders of US debt have had losses in it as interest rates rose, and they have more of it as a percentage of their holdings than makes sense on a financial basis alone. In the case of the biggest foreign holders of US government bonds, they have so much because they want to store buying power in the most widely used and accepted currency of the greatest and most credible world power—said differently, because it is the leading reserve currency of the leading world power. Looking ahead, given that increased supply of US government dollar debt that is coming (as shown in the last chart) relative to the desired demand for it, it is hard to imagine that these big buyers/holders are likely in the future to buy the huge amounts of US Treasuries that they did in the past, especially if any of the key underpinnings of that demand weaken—e.g., the US government a) irresponsibly handles its debt and its domestic and foreign policy issues, b) if the US government threatens to sanction them by withholding payments of the debt, c) if the returns from holding this debt are bad, and/or d) the US loses its economic and geopolitical prominence.

As US debt service levels kept rising, debtors needed lower levels of interest rates to make debt service affordable. From 1980 until 2008, lowering interest rates was more than enough to keep debt service affordable even as debt levels kept rising. But **when rates nearly hit zero in 2008, as they did in the post-1933 period, private market demand for the bonds was inadequate to meet the supply so the central bank stepped in with money printing and buying the bonds, which put downward pressure on longer-term rates. It happened in two major waves—one in response to the 1929-33 debt-crisis-induced Great Depression when interest rates hit 0%, so in the post-1933 period, and again in response to the 2008 debt-crisis-induced Great Recession when interest rates hit 0%, so in the post-2008 period.** I wouldn't have known that, and Bridgewater wouldn't have been successful in this period if we hadn't studied the timeframe shown in this chart. This is also what led to my first discovery of how the Big Debt Cycle works.

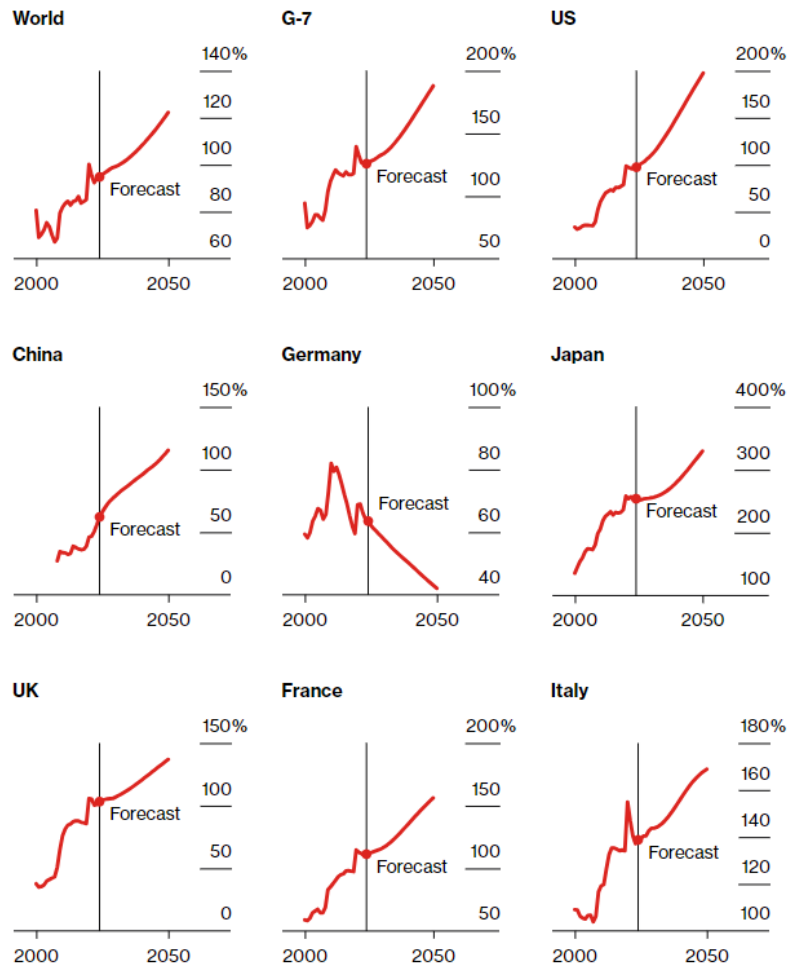


**As for the central bank, the Federal Reserve and other central banks' debt assets provide lower returns than the costs required to service their liabilities, so the modest rise in the interest rate that has occurred in this most recent tightening has caused the Fed to take modest operating losses (blue line below).** If the bonds on the Fed balance sheet were marked to market, its losses would be around \$700 billion, or 2.5% of GDP (red line). This sounds significant but is relatively minor versus the central bank's capacity to obtain funding. However, it is a red flag and would become a major problem if there was a big selling of US debt, which is what typically happens when that debt is perceived as a risky asset. As previously explained, for countries like the United States that have the ability to print their own money, that would lead to either a) a big and intolerable rise in nominal and real interest rates, which would contract credit and lead to a severe economic contraction, or b) a big central bank printing of money and buying of debt and providing of credit, which would lead to the devaluation of debt and money. The big central bank losses and bad conditions would also increase the likelihood that the central bank's independence would be called into question. For those countries that have debt denominated in a reserve currency that is not theirs, conditions would be much worse.



## Debt Burdens Will Increase Globally

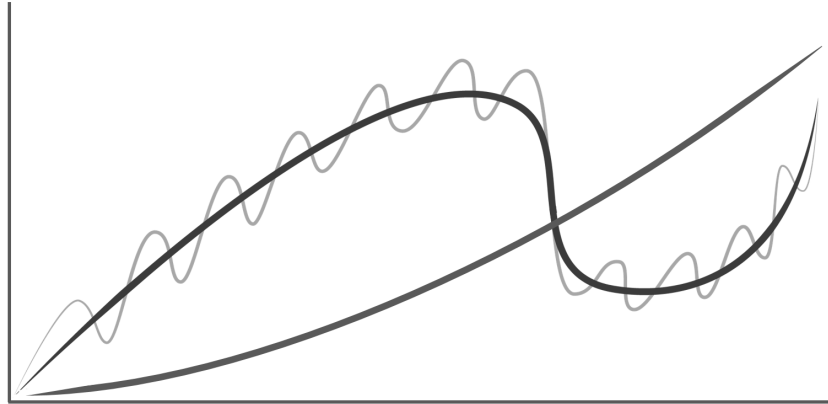
In this introduction, I focused on the debt picture for the US. You can see below that this is not only an American issue. Debt burdens are projected to grow substantially across the developed world (excluding Germany) over the coming decades. It is crucial to understand how these dynamics will play out in order to understand how to make policy and trade in markets through these coming decades.



Source: Bloomberg Economics  
Note: Debt as proportion of gross domestic product

To reiterate, I am going to take you through the Big Debt Cycle for the US because the US dollar was and still is the dominant reserve currency that most transactions were and are denominated in and most savings are in. However, in this chapter you will see the Big Debt Cycles of several countries unfold. In Chapter 14, I will dive more deeply into the Japanese Big Debt Cycle. To me, the US over the last 70-80 years, Japan after its bubble bursting, and the other cases I have looked at are all classic Big Debt Cycles that are operating in the previously described ways that are important for investors and policy makers in all countries to understand now that some of them are encountering Big Debt Cycles in their own countries and they will likely experience serious consequences from those in the US and the US dollar assets and liabilities. While reading this chapter, note the interactions of these debt cycles with the political, geopolitical, nature acts, and technology forces.

To reiterate, I think that there are short-term money/credit/debt/economic cycles that add up to long-term money/credit/debt/economic cycles that cause swings around uptrends in productivity that are due to humanity's inventiveness especially of new technology so, figuratively speaking, it looks like this to me.



We will now look at what happened through the phases of the long-term debt cycle.

## Chapter 9: The History and Lessons from Phase 1, from 1944 to 1971—A Linked (i.e., Hard) Monetary System (MP1)

This type of monetary system, which I call Monetary Policy 1,<sup>7</sup> is one in which the currency can be used to buy a designated hard asset (most often gold) at a set price, and, because of that ability, the supply of the currency is supposedly limited. That is because if the supply of the currency becomes too large, its price should fall. This would lead people to take their money to buy the item the currency is backed by (e.g., the gold), which will lead to the currency being turned in, so taken out of supply, thus supporting the value of money. The problem with this system is that it has never worked in the long term because, even with the link to a hard asset, governments still issue more debt than they should, which leads to many more claims on the asset than the money is convertible into (e.g., gold) than can be converted at the specified price. The consequences of this are almost always a “run on the bank,” with people rushing to make the conversion, and the breaking of the promise to deliver the hard asset.

**From 1944 to 1971 there was a gold-linked monetary system in which dollars, which at the time were considered like checks with no intrinsic value, were exchangeable for gold, which was considered the real money, at a fixed exchange rate. Other currencies were exchangeable for dollars at agreed-upon and changeable rates.**

During this 27-year period, there were five short-term debt/economic cycles, which were wiggles around an uptrend in debt relative to incomes during this period. In brief, here is what happened, including what happened with all five of the big forces.

World War II ended the prior world order and caused the transition to the new world order that we are now in. As always, the biggest winners of the war—in this case, the US, Great Britain, and their allies as well as the Soviet Union and its allies—determined the rules of the new world order including the new world monetary system. **In 1944 the US, Great Britain, and their allies created what would be the new monetary system**, which was called the Bretton Woods monetary system (because it was created in Bretton Woods, New Hampshire). It looked like most prior monetary systems that existed throughout the millennia **with “paper” money being linked to the real money (gold), which was held in banks (in this case, central banks)**, though it had its own particular characteristics, as they all did. In this case, because the US had about two-thirds of the world’s gold,<sup>8</sup> which was held by the US Treasury, the dollar became the world’s reserve currency. Other countries had their own currencies, so to get gold from the US central bank, they had to buy dollars and then use those dollars to buy the gold. Only countries’ central banks were allowed to buy gold; individuals were prohibited from buying gold with their paper money. In fact, in the US and most other countries, it was illegal for citizens to own gold because governments wanted people to save in debt assets in order to build the credit system and they didn’t want debt assets to have to compete with gold. This system was created for the United States and countries that wanted to join it, and the US wanted to let others in. Great Britain became a subordinate power in this new order because its financial and other powers were weakened by the war, while the United States became much richer because it entered the war late. The Soviet Union had its own monetary system, and ways of doing things that were independent of the US-dominated system.

**The main geopolitical competition was between the US (which was a capitalist democracy) and the Soviet Union (which was a communist autocracy).** The United States was much stronger economically and militarily than the Soviet Union, so it was able to provide financial support programs like the Marshall Plan to help build its allies, especially in Europe. These programs were done to enhance alliances, which was especially important at a time of the Cold War. Because the US was rich (it had two-thirds of the world’s gold which was money at the time), had the world’s reserve currency, and accounted for about half of world GDP, it could easily afford to provide this support to allies. Having the world’s reserve currency, which other countries wanted, gave it great buying power that it abused.

**At that time, China, which was allied with the winning powers against the Japanese in the war, was a destroyed and powerless country having suffered what it calls the “Century of Humiliation,” in which foreign countries took**

<sup>7</sup> In my book *Principles for Navigating Big Debt Crises*, I didn’t call this phase Monetary Policy 1 because the monetary policy that I was used to was the interest-rate-driven monetary policy, and so I called that Monetary Policy 1. Upon reflection, I decided to change the numbers.

<sup>8</sup> <https://www.stlouisfed.org/publications/regional-economist/first-quarter-2020/changing-relationship-trade-americas-gold-reserves>



**over different parts of China, conditions deteriorated terribly, and the whole system of government collapsed.** This roughly 100-year period began in 1839 and ended with the end of World War II. During this period, Japan took over Taiwan in 1895, which was given back to China by the winning powers at the end of the war. **Between 1945 and 1949, China had its version of a classic civil war between hard-right capitalists and the hard-left communists. That led to the communists driving the capitalists out to Taiwan, Chinese communists siding with Russian communists, and the United States alienating China. At that time and since, it was agreed that there was only one China and Taiwan is part of China, and the argument was over who controlled Taiwan and China. Arguments about this issue have festered for a long time and are intensifying, which is especially important because of the powers the US and China have and because Taiwan is the center of chip production, which today is even more important than oil production was in the last cycle.**

**In that early post-war period, inventive people, especially American scientists and entrepreneurs who were primarily financed by the capitalists with government support, continued to come up with great new technology that would eventually have huge effects.** For example, in 1956 "artificial intelligence" and the personal computer were invented, and in 1957 the satellite was invented. In the mid-1950s the technical foundations of the internet were developed. Of course, there were too many inventions that had big economic, political, geopolitical, and environmental effects for me to delve into here.

**Because Great Britain was heavily indebted and in fast relative decline economically and militarily, it rapidly and persistently had its bonds and money devalued in the classic ways that were described earlier and that are important to keep in mind when looking at the US now.** Immediately after the war, Britain had a lot of debt, and it had colonies and military bases in over 40 countries that it couldn't afford to maintain. I won't repeat all the steps, but I will point out that this overextended British Empire had debt problems that led to a managed 30% devaluation of its currency in 1949, which was followed by a series of devaluations in the years that followed, all to relieve its debt burdens at the great cost of its debt holders. The decline in the value of the currency and debt was classic. There were debt payment problems and the inevitable losses of the controlled foreign territories that made it obvious to the world that Great Britain was declining, which reinforced the desire not to hold its debt and currency and led to their further declines. Most obviously, when Egypt took over the Suez Canal in 1956, loyal holders of Great Britain's bonds sold them. In 1967, another financial crisis led to another major devaluation and abandonment of its debt and money being held as a storehold of wealth, and in 1976 Britain's financial condition got so bad that it had to go to the IMF for financial help. The decline of the British pound and Britain is the most recent classic case study of the decline of a reserve currency, which is described at length in my book *Principles for Dealing with the Changing World Order*.

**In the early 1960s, the US short-term money and credit cycle was expansionary, which was great for the US markets and economy until 1965-66 when inflation rose to 3.8% and the Fed tightened monetary policy, inverting the yield curve for the first time since 1929 and leading to a recession in 1969-70. That produced, in 1968, what would be the peak inflation-adjusted price in the S&P 500 for the next 25 years, with that long period of bad performance due to the big cycle influences I described earlier in this study.** That long period of terrible stock and bond market performance and terrific gold and other inflation-hedge assets performance was primarily due to the needed creation and devaluation of money to deal with the debts (i.e., the debtors' obligations to deliver money) being too large relative to the actual amount of real money in existence. That paradigm taught me a lot about the need to be able to make money in all types of market environments and the skills required to do it. It also puts me today in a very different mindset from most investors who haven't been through something like that and have views based just on their experiences and so think that being long just in equity-like assets and ignoring the big cycles is the best way to invest.

**In the 1960s, there were also some nail-biting political and geopolitical conflicts that made a big impression on me, most notably when the Cuban Missile Crisis in 1962 brought the world's two most powerful countries to the brink of nuclear war.** I was 13 at the time and vividly remember watching John F. Kennedy's address to the country explaining the situation and wondering if there would be nuclear war or which country would back down. Cuba's leader, Fidel Castro, wanted to go to war, which could have been a nuclear war. The stock market didn't behave nearly as badly as I thought it would have. What happened was that the Soviet Union pulled its missiles, which were aimed at the US, out of Cuba, and the United States pulled its missiles that were aimed at the Soviet Union out of Turkey. This allowed both countries to claim victory without telling their people about their concessions

made, and I got my first lesson about how brinkmanship diplomacy really works and how markets behave during such dramas (when the damages that would result from the conflict are unacceptably high). In November 1963, JFK was assassinated, which also had only a brief passing effect on the markets and economy; there was the civil rights movement; and big spending on “guns” (the Vietnam War) and “butter” (US domestic social programs). These and numerous other seemingly earthshaking events that didn’t have much effect on markets helped me to realize why they didn’t affect the markets more and sort out what really matters and doesn’t matter to market prices and the economy. While I won’t delve into all that matters, I will tell you that what matters to markets is the money that investments earn, so big political events like threats of war don’t matter much until they start to affect those cash flows. That is why, from an investment perspective, I don’t worry about the headline-grabbing events of today that don’t matter much and suggest that you do the same. Also, I learned that most of these global threats turn out to sound more threatening than they actually are because most countries’ leaders will step back from the brink rather than choose to go over it. However, to be clear, there are times that international conflicts have impacts, such as on supply lines and the value of currencies, and there are rare occasions when leaders don’t step back and things blow up, so that these conflicts become very consequential. Because I view protecting myself against these events as being like buying insurance to be protected against an improbable, unacceptable loss, I look for ways to be insured against them even though I don’t expect them to happen.

**In the 1960s, there was also a big geopolitical swing in the relationship between China and the Soviet Union. They changed from being “friendly” countries to becoming “enemy” countries, which led to a corresponding big geopolitical swing between China and the United States from being “enemies” to “friends.”** That led to Henry Kissinger’s secret visit to China in 1971 and then Nixon’s visit in early 1972, which set the stage for China’s opening up after Mao Zedong died in 1976. These developments, like the earlier mentioned technology developments, were like small seeds of change being planted that grew into enormous changes that would affect all five forces everywhere. They mattered a lot even though they didn’t seem to matter much at the time.

During this 1945-70 period, the US overspent and financed that overspending by borrowing, especially **in the 1960s on the Vietnam War and the “war on poverty,” so its paper-money promises to give real money (gold) far exceeded what it had in its bank. That mattered a lot, though it didn’t seem to at the time because the bad finances grew slowly until they led to the blow-up. You see, early in the 1950s and 1960s, most countries were happy to accept these “paper” dollars in return for their goods and services because they wanted to accumulate dollars as savings. As a result, the US could overspend liberally. Also, over those years other countries, especially Germany and Japan, gradually recovered from their big losses from the war and became competitive economically, which led the US balance of payments to worsen. In the late 1960s period, one could see the US and the UK having bank runs on their central banks because holders of paper money turned it in to get the real money (gold), so the US central bank’s reserves of gold steadily declined.**

Seeing the US central bank running out of the real money (gold), Charles de Gaulle, the French president at the time, in 1965 openly called for a reform of the monetary system. Other holders of paper dollars caught on and the run accelerated and the US spending and deficits didn’t slow down, so the run on the US central bank ended like most such central bank runs end. For previously described reasons, the selling of the debt drove interest rates up and the currency down at the same time as the economy weakened. **The US central bank did not have enough real money (gold) in the bank to meet its obligations to exchange it for the paper money at the promised price.**

**On the night of Sunday, August 15, 1971, President Nixon got on the television and announced that the United States was no longer going to allow dollar holders to turn their dollars in for gold. That ended the monetary system, and money, as we knew it. It immediately devalued money, raised inflation, and made it much easier to pay debts for the reasons I previously explained.** I was clerking on the floor of the New York Stock Exchange at the time. It was a summer job between college and business school. I figured that ending the money system as we knew it and preventing people from getting the real money was a big, bad deal, so I expected the stock market to be down a lot. Instead, it was the best day for the market that year—stocks were up more than 3% on Monday. Because I had never experienced a currency devaluation before, I was ignorant about how they worked. That led me to study history, which led me to find out that, in 1933, President Roosevelt had done the exact same thing (default on the promise to allow people with dollars to exchange them for gold at the promised exchange rate) for the exact same reason (the US created more promises for gold than it had in gold, and it was running out of gold and money during a bank run), which had the exact same effect (the devaluation, big market rallies in stocks and

gold). The only real difference from Nixon was that Roosevelt made the announcement on the radio, not television, which wasn't around yet. In both cases, delinking the currency meant the central government didn't have to deliver the real money and freed themselves to create a lot of money and credit. This made it easier to have the debts and stimulate the economy, leading equities, gold, and commodity prices to rise and the economy to pick up. That's when I learned that when central banks create a lot of money and credit, the value of money and credit goes down and the price of most things goes up. I realized that these moves were classic cases of "hard" currency (gold-linked) exchange rate systems breaking down, leading to the devaluations of the money and debt. Once I saw this happen in these two cases, I saw that it happened throughout history in almost all such cases, and I learned the principle that **when there is a big debt problem that is intolerably painful, central banks will "print money" and distribute it to make it easier for debtors to pay their debts, which will devalue the money and debt relative to other assets.** That helped me make a lot of money and avoid a lot of painful losses.

## **Chapter 10: The History and Lessons from Phase 2, 1971 to 2008—A Fiat Money, Interest-Rate-Driven Monetary Policy (MP2)**

**The August 1971 breakdown of the monetary system changed the value of money and how the system worked—i.e., the gold-linked system was replaced by a fiat monetary system in which central banks stimulated and restrained money/credit/debt growth by changing interest rates.** I call this type of monetary system (i.e., one in which fiat currencies are managed via interest rate changes) Monetary Policy 2 (MP2).<sup>9</sup> I make these distinctions between types of monetary policy because they work very differently, and it is important to understand these differences. The most important differences between MP1 and MP2 are that a) in an MP2-type monetary system the amount of money and credit provided by lender-creditors to borrower-debtors is primarily driven by the cost of money (i.e., interest rates) and b) is not restrained by the link to hard currency (e.g., to gold). Because the amount of money and credit was unrestrained and because the world's central banker (the Fed) wanted to accommodate what happened, this changed policy led to a very classic combination of economic stagnation and inflation, which was called stagflation.

### **From 1971 to 1982: Stagflation and Tightening and the Move from the Political Left to the Political Right**

**From 1971 until the end of 1981, the Federal Reserve increased the supply of money by 100%, and the broader measures of money supply that included some bank accounts and cash instruments (called M2) increased by 180%. The prices of a) goods and services (measured in CPI), b) stocks, and c) gold went up by a) about 140%, b) around 30%, and c) about 10x respectively. Stock prices fell by 45% in real terms. Of course, debtors benefited because they could pay their debts with much more available and much cheaper dollars and creditors suffered because the value of the money they were promised dwindled. In that 10-year period, a holder of 10-year Treasury bonds lost around 40% in inflation-adjusted terms, and holders of Baa corporate bonds had slightly negative returns in inflation-adjusted terms. In other words, starting in 1971 and through the next few**

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<sup>9</sup> There are two other types of monetary policy that take place at the later stages of the long-term debt cycle that I call Monetary Policy 3 (MP3) and Monetary Policy 4 (MP4). I will touch on them later in this study. If you are interested in learning more about them, I describe them using a slightly different numbering system beginning on Page 36 of my book *Principles for Navigating Big Debt Crises*, which you can get in PDF form [here](#).

**years, the Fed dealt with the debt crisis by creating a lot more money and credit, which created great debt relief for debtors and great losses of buying power for creditors, which encouraged borrowing and discouraged lending.** This decade of debt monetization developments made a big impression on me and taught me some invaluable lessons about the need and ability to make money in all kinds of markets. I think that current investors who have only lived in an environment in which equity-like assets have had positive real returns are approaching investing by only looking to buy equity-like investments to provide great real returns, and that is a mistake.

**The most important difference between today's US money (i.e., dollars), which has been the most important world money since 1944, and dollars in the 1945-71 period is that today's money is and has been fiat money since 1971. That has meant, and it still means, that the Fed (which is essentially the world's central banker because the US dollar is the world's dominant medium of exchange and storehold of wealth) can more freely create money and credit than in the past. Other central banks can do the same, so this affects all mediums of exchange and storeholds of wealth. For previously explained reasons, doing that is the easiest and most subtle way for governments to alleviate debt burdens and confiscate wealth.** By the way, fiat monetary systems have existed throughout history, so studying those in the past provides invaluable lessons of how they work that can provide clues for how the one we are in will go as the debt cycle progresses.

While the gold-dollar-based system broke down in 1971, the US remained the dominant world power economically, militarily, and in most other respects, and most world trade and capital transactions were done in dollars, so the dollar remained the world's leading currency that governments, companies, and people wanted to save in despite the fact that it was such a terrible storehold of wealth in the 1970s.

**In the 1971-81 period, it paid to be a borrower-debtor because the big devaluation that started in August 1971 had immediate inflationary effects, which were accompanied by big rises in oil and other commodities' prices and a fiat monetary system that gave central banks the freedom to continue to keep creating credit and keep interest rates low.**

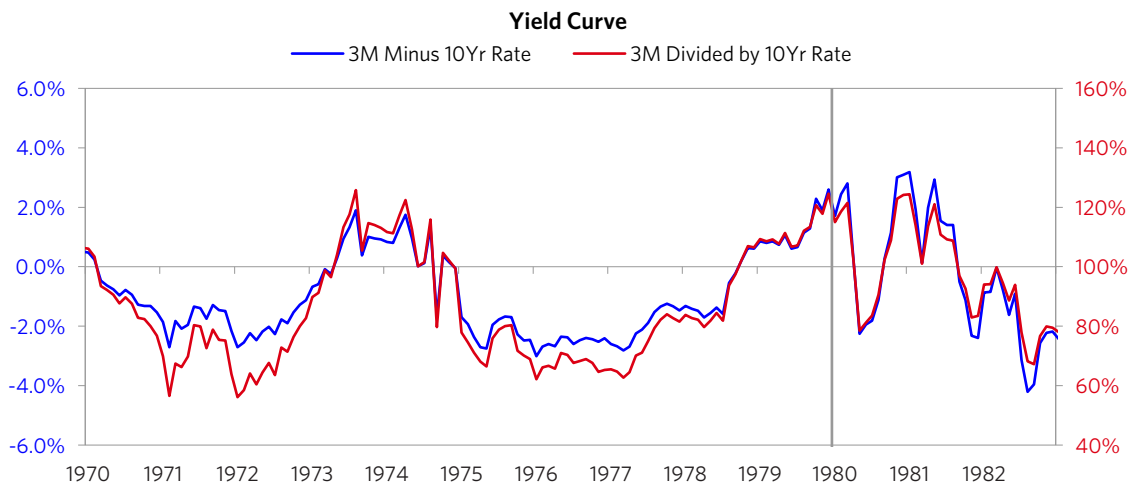
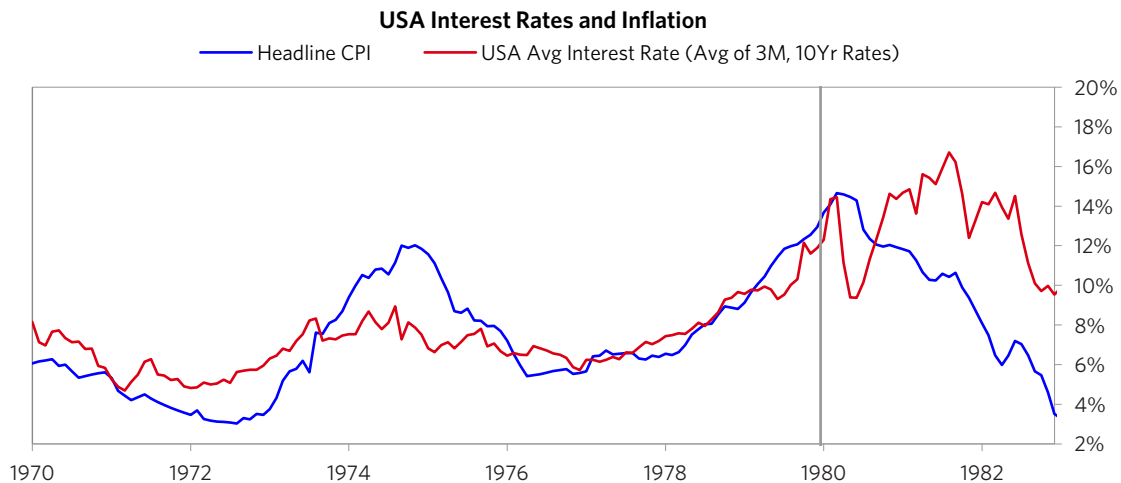
The inflation of the 1970s came in two waves driven by two short-term debt cycles and geopolitical shifts. The big easing of monetary policy in 1971 after the delinking with gold got it going. Then, **in 1973, the British Empire and colonialism were breaking down, so there was a big geopolitical shift in the Middle East that led to the first "oil shock" that caused more inflation.** It was mostly a fight about money, as it normally is. More specifically, at that time, the colonized countries of the Middle East (and elsewhere) were overthrowing the colonialists that controlled them and nationalizing the colonialist claims on the assets of the colonized. In the Middle East, Saudi Arabia, Iran, Iraq, and Libya nationalized most of the oil properties that were owned by the "Seven Sisters" (the seven major oil companies), and in October 1973, war broke out between the Arabs and Israelis. These events led to oil prices rising a lot, which led central banks, especially the Federal Reserve, to pursue highly accommodative monetary policy in order to ease the economic pain of rising prices, which allowed more money growth, which produced more inflation in almost everything, especially in commodities and real estate. **Commodity producers, especially in emerging countries, boomed, so naturally dollars from Europe, the US, and elsewhere began to be lent to emerging countries' commodities producers, which began their debt-financed booms and bubbles, which contributed to the "stagflations" in the US and most of the world.**

In the early 1970s, a lot of dollars were held in other countries, especially in European countries, so there was the growth of what was called the Eurodollar market. Those dollars had to be lent out. Because there was high inflation in the world due to the previously described currency devaluations, commodity prices were high, so it seemed good to lend to commodity-producing emerging countries. That fueled a boom that created a bubble in these countries, with the lender-creditor to them being US, European, and some Japanese banks.

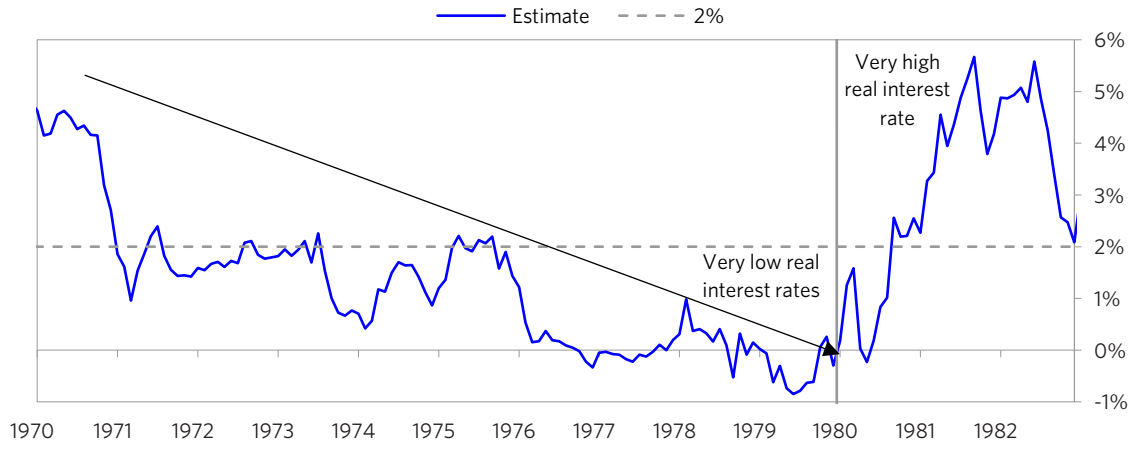
In the 1970s, there were two short-term money/credit/debt/economic cycles that each transpired in classic ways with the Fed's decisions to ease and tighten monetary policy driving them, though the second money/credit/debt and inflation surge was much bigger than the first.

In the 1971-74 period, money was easy, inflation, and economic activity rose, and the oil-exporting countries embargoed oil, which sent oil prices and inflation higher. So, from the end of 1973 to 1974 the Fed tightened money and credit, raising interest rates, inverting the yield curve, which sent the markets and the economy into severe declines. That led to a recession. That completed that short-term debt cycle.

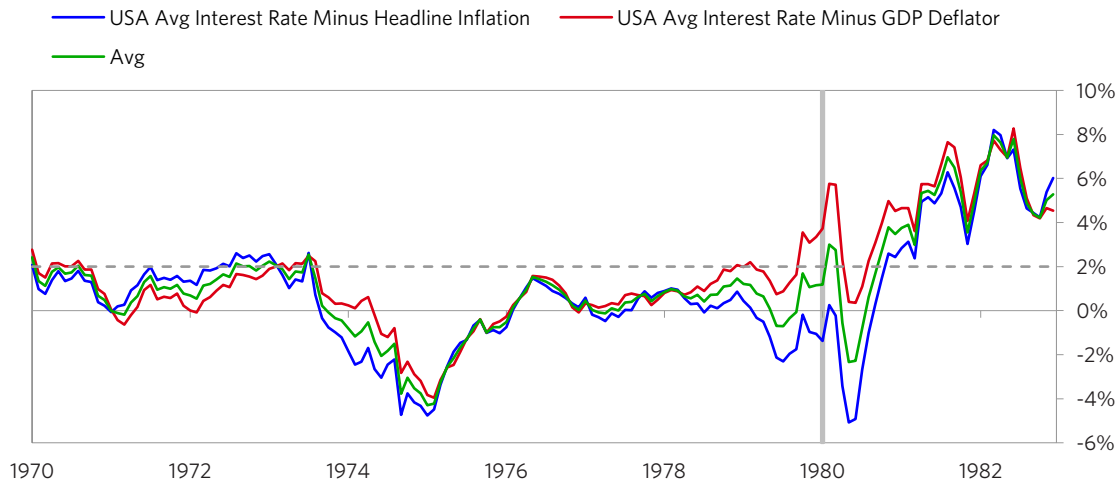
**Then it happened again. Easy money and credit following the recession caused inflation and economic activity to pick up and there was a second oil price shock that was due to and caused by internal political and international geopolitical conflicts.** In Iran, the Shah's domestic order was overthrown, which led to the US embassy being seized and American hostages being held by those who took power. That began the conflict with Iran that remains with us. This development was both inflationary and humiliating for the United States. The charts below show the average interest rate (the average of the 90-day Treasury bill rate and the 10-year Treasury bond rate) and the CPI inflation rate from 1971 through 1981. As you can see, in the 1970s interest rates rose more slowly than inflation rates, so real interest rates were low until they were negative (as low as -4% at certain points, compared to the average up to that point of 2%). These artificially low interest rates relative to inflation rates were great for borrower-debtors and terrible for lender-creditors which encouraged borrowing and buying which drove inflation rates up and interest rates followed until the inflation became so bad that changes had to be made which led to the reverse. You can clearly see the two short-term debt cycles reflected in this chart. The vertical lines in these charts represent January 1980.



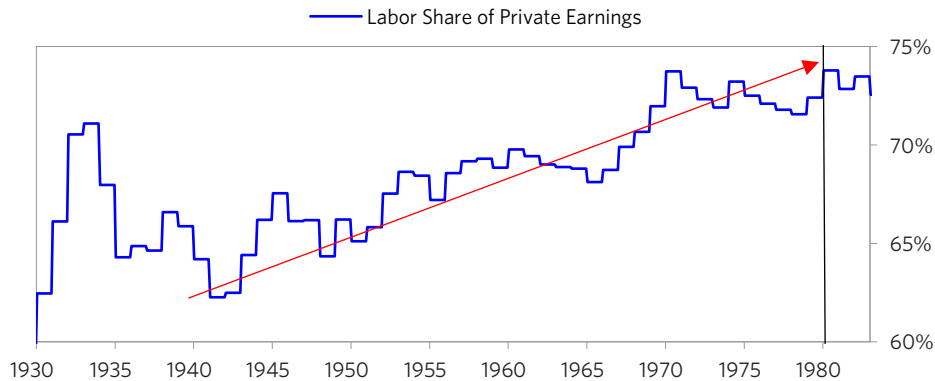
### USA Estimated Real Bond Yield



In the chart below, you can see a few other flavors of real interest rates.



At the same time, workers and labor unions had become stronger, which raised wage inflation and squeezed company profit. As shown in the chart below, labor's share of revenue had increased from 68% in 1965 to the US historical high of 74% in 1980. That both reflected and influenced the political cycle that accompanied the debt cycle.

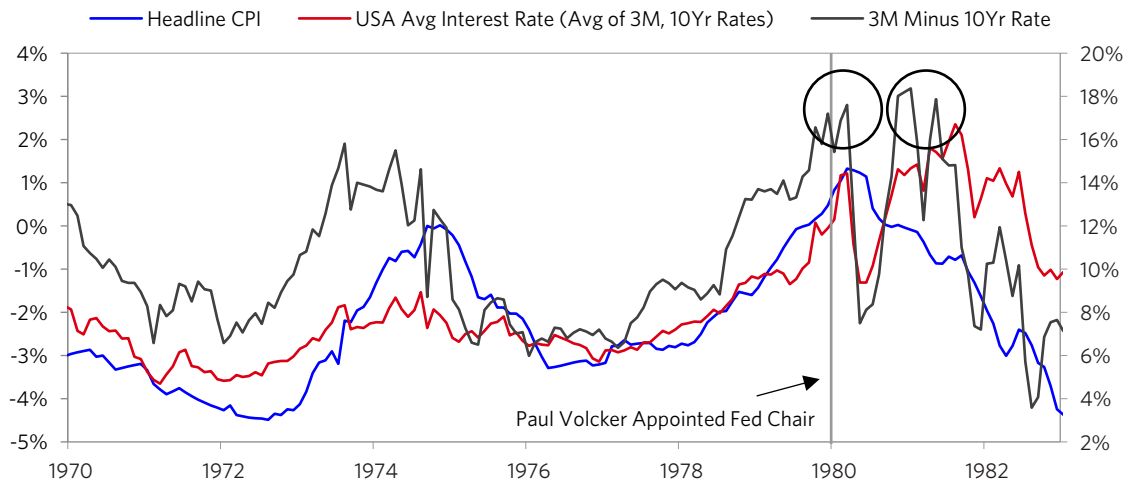


Enough was enough. The combination of high inflation, weak dollar, bad economic conditions, bad conditions for businesses, and geopolitical crises was intolerable for voters.

The debt/money/economic, domestic-political, and international-geopolitical pendulums/orders had swung too far, to their extremes, so big changes were made and conditions were reversed. Pretty much everything changed and moved in the opposite direction. More specifically, in reaction to the uncontrolled inflation, Paul Volcker was appointed chair of the Federal Reserve to shift monetary policy from very easy to extremely tight, and in reaction to the generally terrible conditions that occurred under left-leaning governments, Ronald Reagan, Margaret Thatcher, Helmut Kohl and other right-leaning governments gained control. In other words, there was one of those classic roughly synchronized debt/economic and political swings that typically occurs because the people's discontentment with their conditions causes discontentment with the country's leaders and the party in power.

**When Paul Volcker was appointed as chair of the Federal Reserve in 1979 to fight inflation, he severely tightened the supply of money and credit growth, which led to the tightest money and the highest level of interest rates “since the birth of Jesus Christ” (according to German Chancellor Helmut Schmidt).**

**The chart below shows the CPI inflation rate (as a simple proxy for inflation), the average of the three-month and the 10-year interest rate (as a simple proxy for interest rates) and the yield curve (the three-month rate minus the 10-year rate—as a simple proxy for the tightness of monetary policy). From these charts, you can see the two short-term credit cycles in the 1970s and you can see the next one emerging in the early 1980s. You can see that money was made very tight money to fight inflation around 1980.**



**In addition to the monetary tightening, high real rates, and falling inflation there was a shift from liberal to conservative labor policies. Thatcher in the UK, Reagan in the US, and Kohl in Germany (all moderate conservatives) led strong fights against labor inflation and labor unions that cut labor's share of the revenue pie, which reduced inflation and raised corporate profits. These conservative leaders also cut taxes on income and corporate profits and pursued tougher geopolitical policies.**

The new Iranian leadership released the hostages exactly as Reagan took office in response to his threat of severe consequences if they didn't. Thatcher went to war with Argentina and won; the war was over Argentina's attempt to take the Falkland Islands, which were a group of small, nothing-special, British-controlled colonial islands. And Reagan accelerated the Cold War with the Soviet Union, which eventually ended the Soviet Union.

**The strong moves by the American central government and central bank changed the flow of money and power and the direction of most everything. The markets respected strength and loved the combination of falling interest rates, falling inflation rates, high real interest rates, improving profit margins, and falling tax rates.** It was a capitalist's delight. I remember the changes in policies and the changes in mood very well, especially the willingness of these leaders to have the fights to do the difficult things, even when doing these difficult things was painful.

**As a result of all of these things, the 1980s were more opposite than similar to the 1970s—i.e., it was a decade of disinflationary growth, strong stock and bond prices in developed countries, and debt bubbles popping leading to classic inflationary depressions in emerging countries.**

Throughout this period, I was deeply involved with these markets and the circumstances that drove them, which gave me the perspective that allowed me to identify great investment opportunities and to describe the mechanics of the process in the last chapter. But that's not to say that I fully understood all the mechanics behind these big moves from the start. In 1982, I had been dead wrong because I expected the big debt crisis to cause big debt problems for American banks, the stock market, and the American and world economies. I was wrong because I



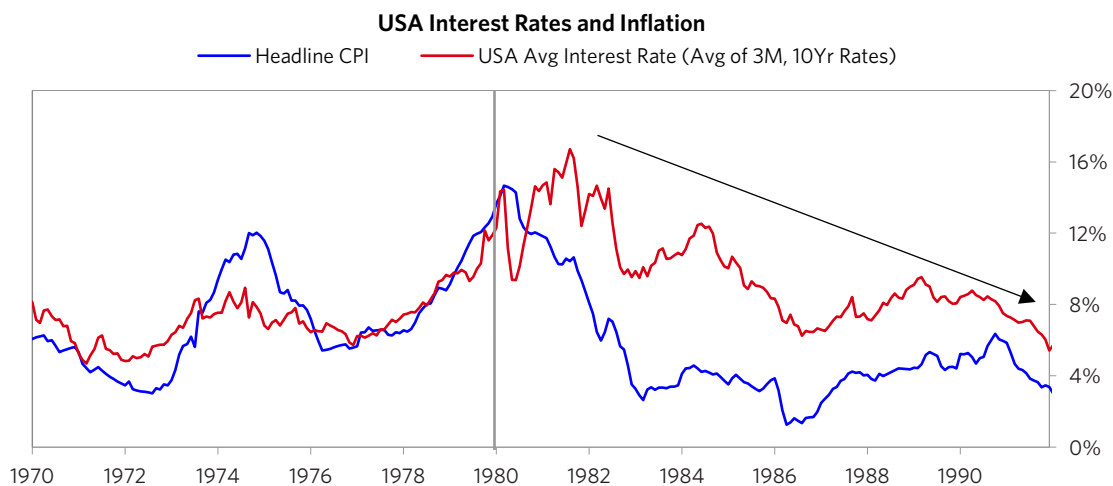
failed to anticipate how forceful the change in global financial flows away from emerging markets and into American markets would be and how well the Federal Reserve and the regulators would protect the American banks. That failure provided me with painful great lessons about the need to watch capital flows and how to do it, about how to diversify to reduce my risks without reducing my returns, and about how to be humble. That painful experience, like my others, turned out to be great because it educated me, which radically improved my and Bridgewater's performance over the next 30+ years.

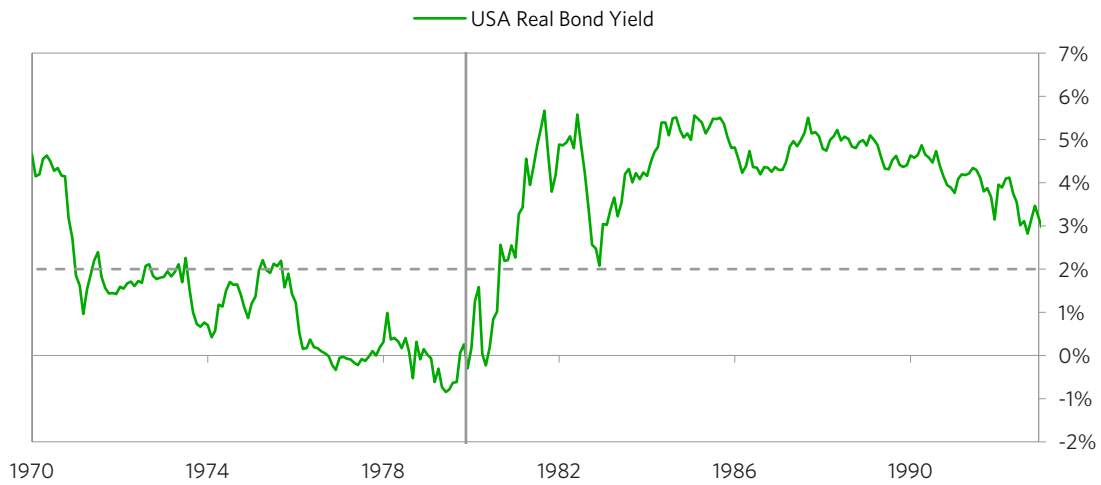
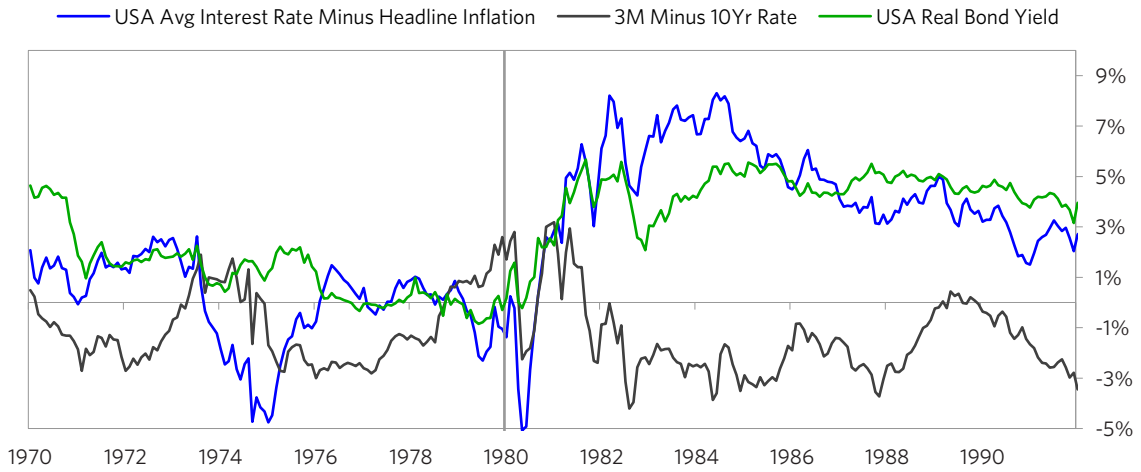
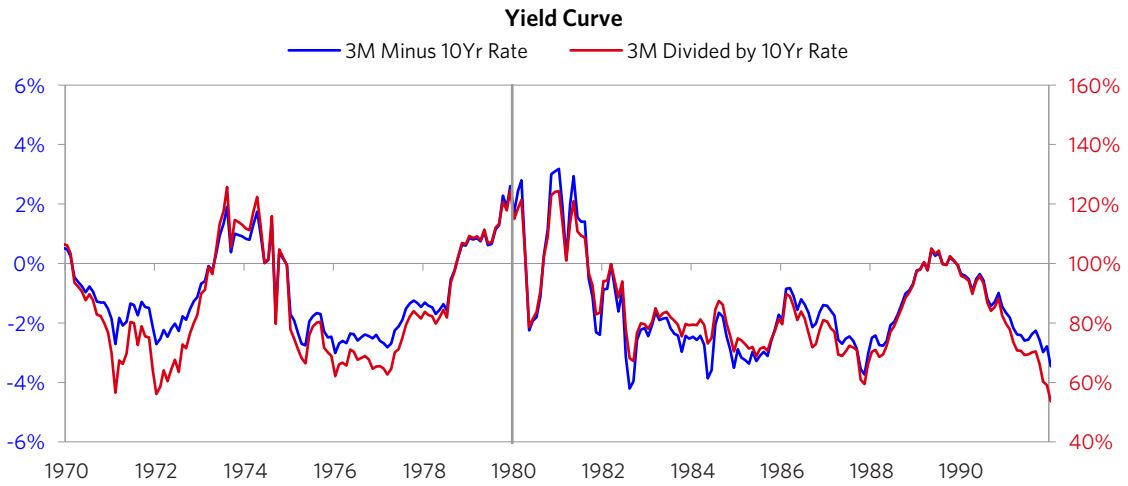
**As you can see, all these big movements in markets and economies that had big effects on politics, geopolitics, and technology development were driven by money/debt/capital flows. For that reason, I decided to become an expert on capital flows.**

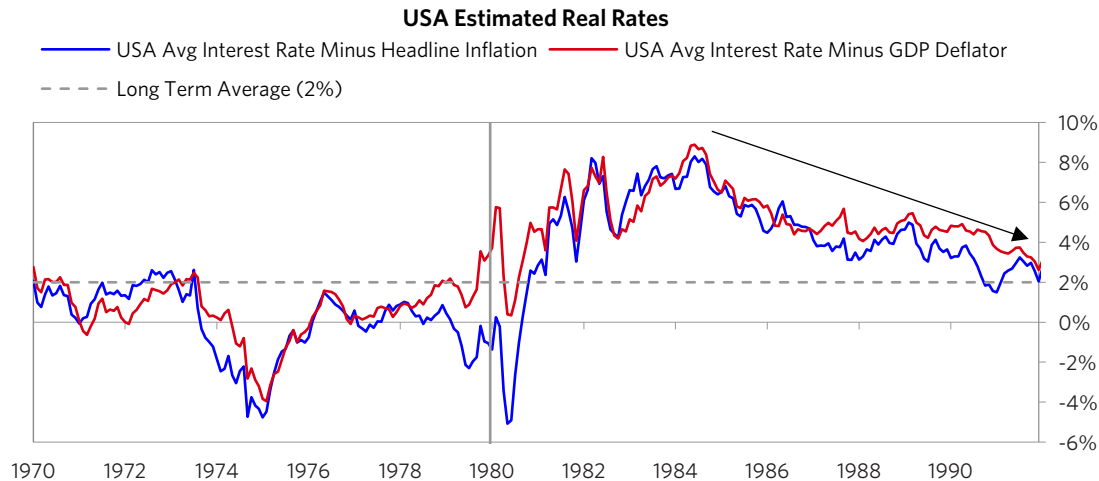
**The decade from 1971-72 to 1981-82 was a very painful and very classic decade of debt restructurings and debt monetizations that played out following the archetypal template previously described. As is quite typical, the decade that followed it was more opposite than similar.**

### **From 1982 to 1990: Falling Inflation, Strong Growth, and Levering Up; from One Debt Crisis to Another; Still Operating with an MP2 Monetary Policy**

**The 1979-82 monetary policy changes shifted the environment from benefiting borrower-debtors, as it had in the early 1970s, to benefiting lender-creditors, as it did in the 1980s. As shown below, it lowered the inflation rate, which lowered interest rates while keeping real interest rates relatively high in the 1980s.** The charts below update the previous chart, showing interest rates and inflation rates through 1990 so you can see how different the 1980s were from the 1970s. The monetary policy moves that ended the 1970s' decade-long period of rising inflation, rising nominal interest rates, and low real interest rates created the 1980s' period of falling inflation and its relatively high real interest rate environment, which began a long period of falling interest rates. With those things happening and profit margins widening, the 1980s were more opposite than similar to the 1970s. They were almost ideal for the markets and the economy because strong growth was accompanied by falling inflation, falling interest rates, and big stock and bond market gains in the US and most developed countries. As shown below from the early 1980s to the early 1990s inflation had fallen a lot and interest rates and the tightness of credit had fallen more, thus shifting the environment from one that was great for lender-creditors and terrible for borrower-debtors to one that was slightly good for borrower-debtors and slightly bad for lender-creditors.







In the 1980s, the previously described tight money and short dollar (debt) conditions drove the dollar higher until 1985 when there was the “Plaza Accord,” which was an agreement to get the dollar to fall, which it would have done anyway because the large current account deficit and the large demand for dollars were unsustainable. Throughout these years, there were big swings in interest rates and inflation that felt massive as you lived through them. But the overall dynamic is clear (seen in the prior chart): in the 1980s, inflation rates fell as a result of the tightness of money in the 1980-82 period, then interest rates also fell, following inflation down but keeping real interest rates relatively high. **Those high real rates were great for lender-creditors and terrible for borrower-debtors. And then when nominal interest rates fell after inflation began to fall, it was great for bond and stock prices because the discount rate used to value future cash flows fell, and the lower rates made borrowing easier. All of this was good for economic activity. And along with declining inflation it created an ideal set of circumstances for US markets and the economy.**

But where was this transfer of wealth from? It came from the borrower-debtors who held high-interest debt liabilities and debt assets, especially emerging market borrower-debtors who had borrowed in dollars and had their earnings in local currency, and those that lent to them (especially US multinational banks). The cycle that they experienced was classic. The high interest rates not only made dollar debt more expensive to service, but it also helped drive a rally in the dollar. Those countries that had debt liabilities and debt assets denominated in the tight foreign currency (US dollars) that they couldn’t print faced debt default problems, while those countries that had debts in currencies that they could print had their currencies plunge in value due to the money printing. In other words, that produced monetary inflation (i.e., inflation in the currencies they could print) and monetary deflations in the currencies that they owed and couldn’t print.

The debt bubbles of the late 1970s turned into classic debt busts when there was a big tightening that tortured both sides with an ugly deleveraging in the 1980s. Those countries facing debt busts, including many emerging countries, experienced a classic full debt cycle over these 20+ years that included inflationary depressions because there were great debt monetizations that depreciated the value of the money and debt denominated in their local currencies while they had deflationary debt default problems in the foreign currency debt that they couldn’t monetize. That cycle transpired in accordance with the template laid out in the last chapter. The debt bust for these countries created a classic “lost decade” with inflationary depressions in these countries and classic debt workouts for the banks that had lent to them. Eventually, in 1991, there was a classic end to the debt bust that occurred in the way described in the last chapter—i.e., the local currency debt was devalued and the foreign currency debt was restructured. Also, near the end of the cycle, most overly indebted governments sold their government assets to build foreign exchange reserves, and they linked their domestic currencies to the dollar, completing their Big Debt Cycles.

Of course, each country experienced its own cycle and we will explore a few of these cases, notably China and Japan in Chapters 13 and 14. But there were also important geopolitical shifts during this time that impacted the big cycle for all nations in important ways.

During the 1980s, the geopolitical landscape changed as the Soviet Union fell, China rose, and wealth gaps increased. These changes were mostly driven by the Soviet Union's inadequate financial and economic system. More specifically, the United States had much more money and productivity than the Soviet Union and so it out-competed the Soviet Union in most everything; notably Reagan had the US outspend and outcompete the Soviet Union in military spending. That led to the Soviet Union's debt, economic, currency, economic, political, and geopolitical collapses, which were manifest in the fall of the Berlin Wall in late 1989 and the official collapse of the Soviet Union in December 1991.

Deng Xiaoping coming to power in China in 1978 brought about big changes in the 1980s that had big impacts on shaping the changing world order up until now. Deng's ascension was the beginning of China's big money/credit/debt/economic cycle. Before then, there was little credit/debt/savings/economic activity. Deng changed that by creating China's "open door" and "reform" policies, which bought in foreign capitalists with their money and their talent. This swing from pure and extreme communism to market-oriented, capitalism-infused "communism" had a huge impact on China and the rest of the world. That shift unleashed a wave of productivity that led China to become the greatest trading and manufacturing power ever because it was able to produce many tradable goods at much lower costs than could be produced elsewhere. That had a huge impact on China and other countries, as we will explore later. Because of my relationships in China and my financial market skills I was able to contribute to and watch up close China's big transformation during this period. I will detail China's Big Cycle evolution in much more detail in Chapter 13. Suffice it to say for now that China became extremely productive, to a degree that it swamped the world with attractively priced items, earned a ton of money, and lent a ton of money to Americans and others so they could buy Chinese goods. So, Americans got the goods and the Chinese got Americans' debt and I'm still trying to work out who got the better or worse deal.

In the 1980s the most important big inventions were laptop computers, lithium-ion batteries, the internet, search engines, the digitalization of thinking, apps, DNA profiling, and big advancements were made in GPS, video-game consoles, microprocessors, and satellite television. Americans remained the leading inventors and investors while other countries were the leading producers. Most importantly in the 1980s, the technology development force, in which entrepreneurs supported by capitalists, led to the internet being developed which led to the launching of the World Wide Web in 1991 which led to the dot-com bubble emerging in the 1990s' Big Debt Cycle which led to the dot-com bubble bursting in 2000 when the Fed tightened money to rein in the rapid debt-financed speculation on the dot-com miracle.

### **From 1990 Until 2000: More Disinflation and Leveraging Up, Which Led to a Bubble**

In brief, as with all decades, the 1990s brought many developments that seemed giant at the time and are barely memorable in retrospect. I wonder if I am giving you too much detail or not enough. To me, at the time these events were unfolding, every minute seemed like an eternity; now I struggle to remember them, which led to my principle that "everything seems bigger up close." That has helped me keep things in perspective and navigate these changes.

Looking back, I am happy to see that I did well navigating them, which I know is because of what I learned and am trying to convey in this study. In brief, the changes I'd highlight are:

- The Soviet Union fell in 1991.
- Iraq invaded Kuwait to get its oil and the first Gulf War happened in 1990-91, which contributed to rising oil prices, tight money, and a classic recession from mid-1990 to early 1991.
- European currencies that were linked together in the Exchange Rate Mechanism (ERM) in 1979 broke apart in September 1992. Then Europe went from a bunch of independent countries to a European Union in 1993 and a currency union with the creation of the euro in 1999. They made these choices to unify despite the unimaginable challenge of unifying such different and independent people who had a long history of fighting because in this globalized world they were not viable economic or geopolitical powers

if operating separately as individual nations. It remains a highly fragmented union that is declining in competitiveness.

- In 1997-98 there was the Asian financial crisis, which, while concentrated in Thailand, Indonesia, Malaysia, and South Korea affected all countries in the region in the "Asian Contagion." As is typical, these debt/economic crises led to internal social and political conflicts in all those countries to varying degrees. The worst were in Indonesia, then Malaysia, then Thailand, and the least bad were South Korea and China. These crises were all very classic following the previously described process and exhibiting all the classic leading indicators.
- Through most of the decade, globalization and connectivity through the internet were considered good things and flourished.
- Climate change started to get attention as an issue.
- As is typical, in the 1990s amazing new technology was developed, most importantly, Wi-Fi, smart phones, and e-commerce, and further big advancements were made in GPS, video games, and perhaps most significantly artificial intelligence.
- As in all big cycles, all big inventions were financed and accompanied by debt and equity cycles (e.g., the steam engine and the railroads come to mind). In this case, the early development led to excitement that turned into a bubble (in 1995-99), which contributed to an overheating economy and rising inflation which led the central bank (in this case, the Fed) to tighten monetary policy that burst the bubble (in this case, in March 2000) which produced a short-term cyclical downturn in the markets and the economy which ended when the tighter credit and the downturn reduced inflation which led the Fed to ease monetary policy in the classic way.

Also in this period, President Clinton succeeded in transforming a large budget deficit into a budget surplus, so it's one of a number of cases worth remembering to help us think about how to handle things well. There are a few key elements to know about that case which are:

- It was done at a time when unemployment was falling and the economy and profit growth were strong, which both brought in tax revenue and allowed the fiscal tightening that is a growth-slowing, inflation-reducing force be well-absorbed. Said differently, the fiscal tightening was counter-cyclical.
- The increases in taxes and cuts in spending were significant but moderate.<sup>10</sup>
- It was done in a bipartisan way (which was key to getting it done) and led to the Balanced Budget Amendment of 1997.
- It was eventually and repeatedly overridden by a simple majority because it was simply a legislative statute. That is unlike a constitutional amendment, which is what Germany imposed at the end of the Weimar Republic's hyperinflation and has worked ever since.

## **From 2000 to 2008: From the Bubble Bursting to Deleveraging to Releveraging Up to Creating a New Bubble That Popped and Led to the Great Financial Crisis and Debt Monetization**

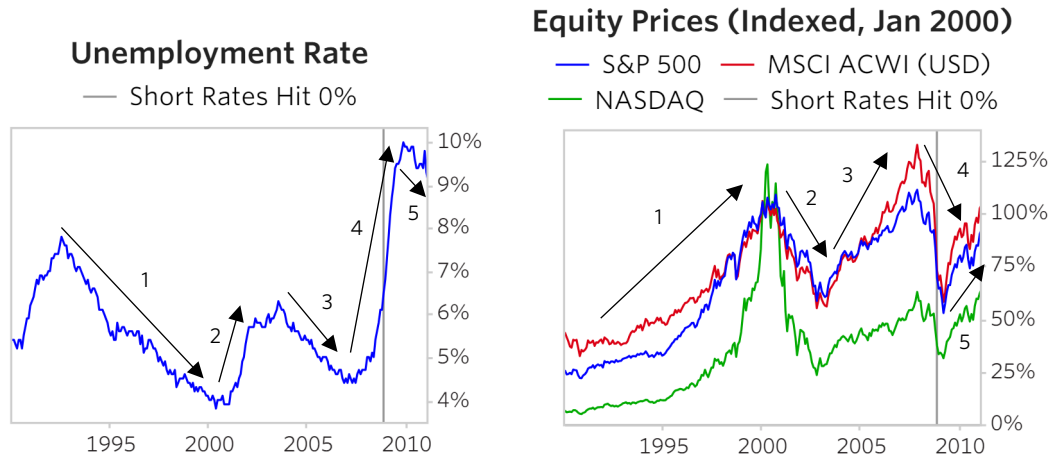
- I remember Y2K as the crisis that was supposed to come but didn't, like so many others, yet what was unexpected happened.
- The debt/asset bubble burst in March 2000, leading the tech-heavy Nasdaq to fall by around 80%.
- On September 11, 2001, the World Trade Center and the Pentagon were attacked which began the war on terror which led to wars in Afghanistan and Iraq, but it remained a period of very little conflict between the great powers. This happening on the heels of the debt bubble bursting added to problems, which contributed to weakness.

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<sup>10</sup> The top tax rate went from 31% to 39.6%, the top marginal corporate tax rate went from 34% to 35%, and gasoline taxes were raised by about 4 cents per gallon, with total tax collections equaling about 19% of GDP annually (a 13% increase compared to what they were before). Spending was cut by 3% of GDP, equaling a cut in the budget deficit of 5% of GDP from the beginning of the plan (the Omnibus Budget Reconciliation) being enacted in 1993 to when the deficit shrank to a surplus in 1998.

- These things led to a recession which reduced inflation and led to the next short-term debt cyclical easing of credit which then led to a recovery.
- In 2006 to 2007 another classic bubble developed. It was a big one, called the 2008 global financial crisis (GFC). It was led by the mortgage/real estate sector being financed by a lot of debt, which led to big debt problems that spread quickly to affect almost everyone in all countries, like the Great Depression in the 1929-39 period did.
- What started with the real estate sector spread to both other financial assets and the real economy—unemployment hit 10% in late 2009 and major stock indices were down over 50% from their peak in 2007.

In the charts below, you can see the short-term debt cycles, reflected in the unemployment rate and equity prices.

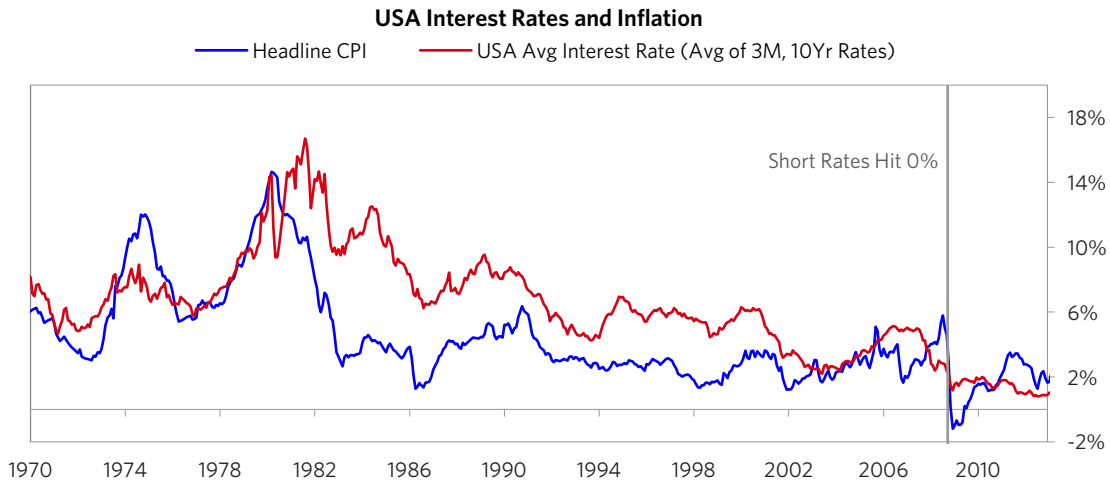


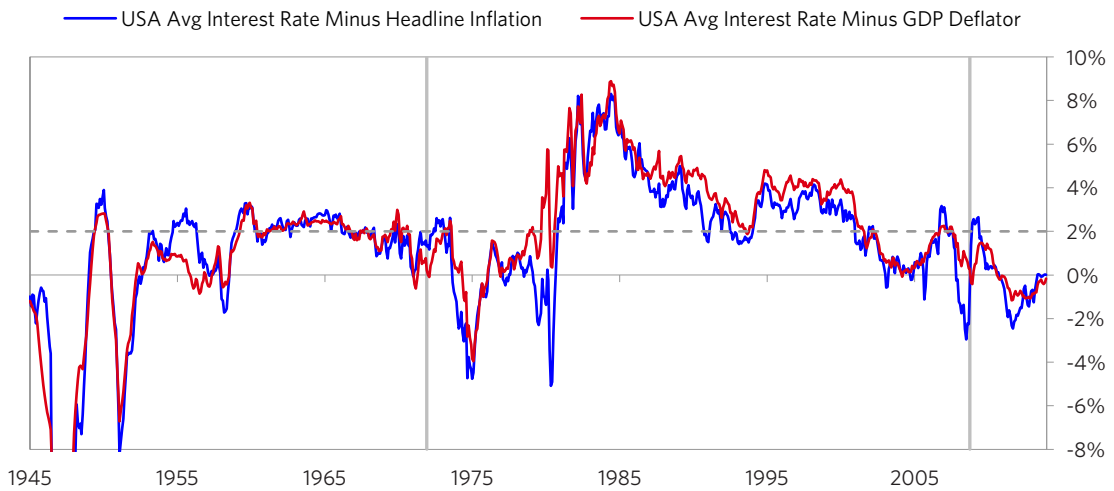
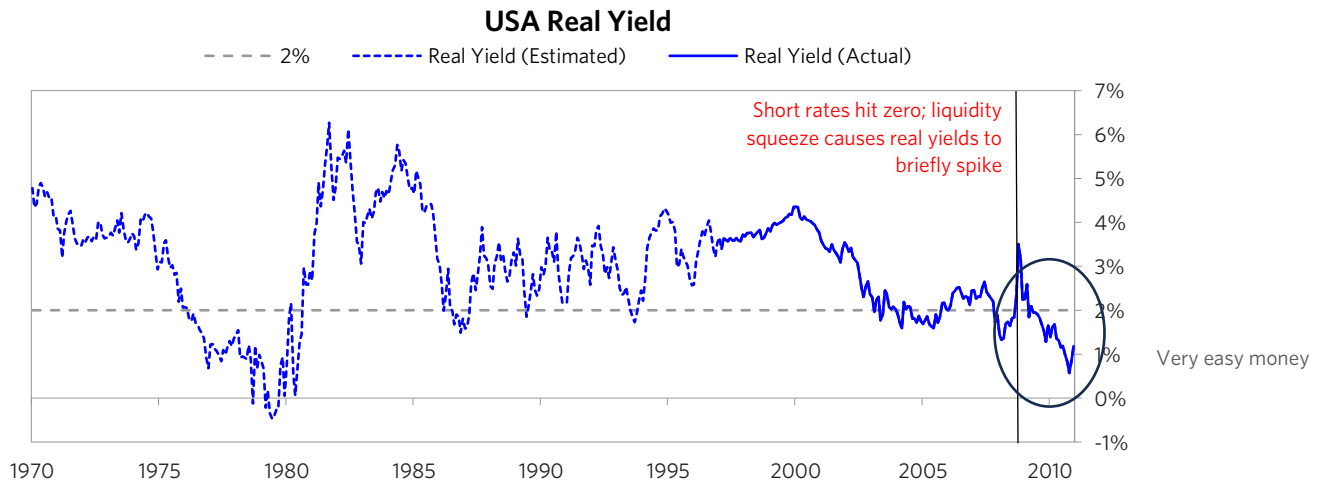
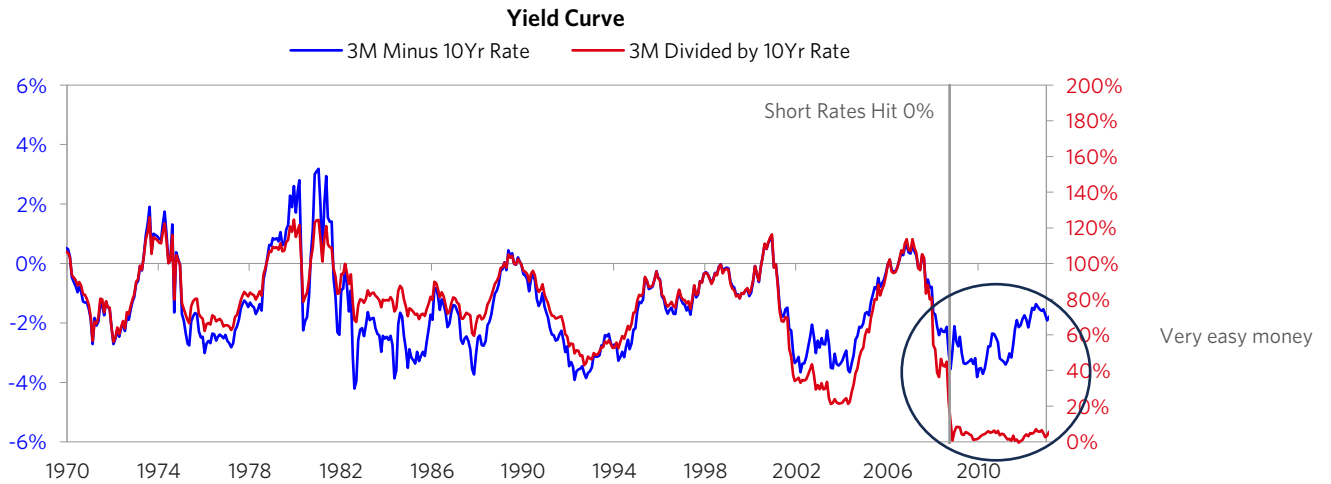
- That drove interest rates to 0% (and below) around the world. Hitting zero eliminated central banks' ability to ease and stimulate the next wave of credit/debt/economic expansion through interest rate cuts, so central banks turned to printing money and financial assets, also known as debt monetization, quantitative easing, and what I call Monetary Policy 3 (MP3) because it classically follows MP2, which is interest-rate-controlled money and credit growth.

This time, and classically at such times, central banks did the “printing of money” (expanding their balance sheets) and buying and guaranteeing of debt to make up for the shortfall in the private sector’s demand for debt assets and to keep interest rates artificially low. They always do that even if it doesn’t make economic sense because their objective is to stabilize markets and economies, not to make a profit. **During this part of the Big Debt Cycle, the central bank becomes the big buyer and big owner of debt (the big creditor) rather than private investors. Because the central bank doesn’t mind having losses from holding the debt that has reduced in value, and because it doesn’t worry about getting squeezed, it can continue to prevent a debt crisis by printing money and buying debt. It is willing and able to lose lots of money and have a negative net worth to protect the government’s and the private sector’s ability to spend even when their finances are bad. This can take place by debt monetization or quantitative easing, which are essentially the same things, though slightly different.**<sup>11</sup> One can see it occur via changes in central bank balance sheets by looking at their holdings of debt assets that were acquired by providing those who sold the debt assets to central banks with cash and credit. In the United States, Europe, and Japan, they own roughly 15%, 30%, and 40% of central government debt, respectively, and roughly

<sup>11</sup> Both are intended to reduce debt problems and stimulate economic activity by the central bank buying government bonds. In the case of quantitative easing (QE) the central bank buys the bonds or other securities from private investors whereas in the case of debt monetization the central bank buys the bonds directly from the government. That normally doesn’t make much difference, though it can when the banking system is impaired.

5%, 10%, and 20% of the total debt, respectively. In the charts that follow you can see this process unfold in the US. See the timing of the hitting of the 0% interest rate bottom and the printing-of-money expansion of the Fed's balance sheet. This ended Monetary Policy 2 (i.e., the interest-rate-driven policy to balance the supply and demand for money and credit via interest rate changes) to Monetary Policy 3 (which is for the central bank to make up the shortage of demand by purchasing long-term debt assets and expanding the Fed's balance sheet). In addition to this happening in the US, it happened in most other countries.

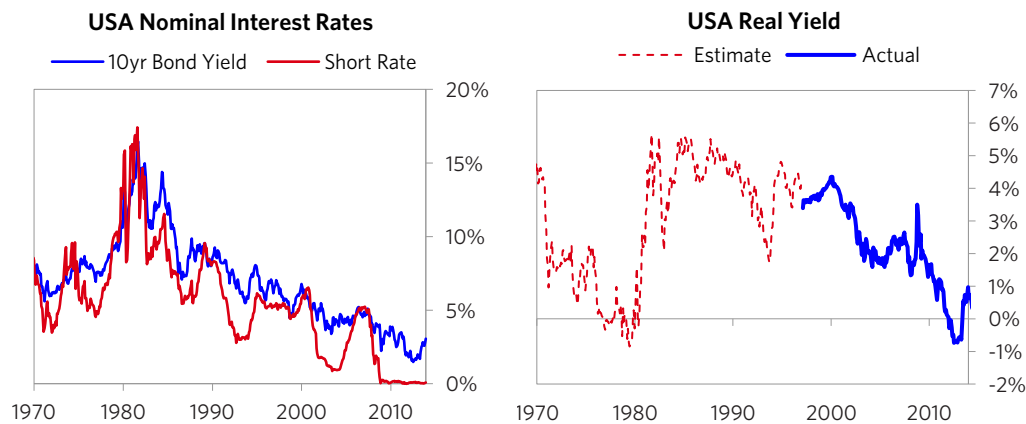






**In the 27 years from 1981 (when interest rates hit “the highest levels since the birth of Jesus Christ”) to 2008 (when interest rates hit 0%), the Big Cycle unfolded with four short-term credit/debt/economic cycles unfolding in it, and when interest rates hit 0%, the interest-rate-driven-monetary policy (which I call MP2) had to be replaced by the quantitative-easing-driven monetary policy (MP3).**

Having studied the big cycles from 1918 to 1945, from when World War I ended, and the new monetary system that began when World War II ended, eight years before MP3 started we put into our investment system rules that if there was a debt contraction crisis and short-term Treasury and fed funds interest rates nearly hit 0%, we would bet on a bad contraction until the central government and the central banks became very stimulative in the ways they became stimulative in March 1933. That served us well in 2008 because we understood it, so we made a lot of money when others lost a lot of money. I saw the big picture of the Big Cycle in interest rates and debt. I saw that since the 1979-82 top in interest rates every cyclical peak and every cyclical trough in interest rates was lower than the one before it until they nearly hit 0% as debt levels increased, which made me wonder what would happen when interest rates hit 0% and let me see that when that happened in the past (in 1933) the central bank printed money and bought the debt. I also saw that the declines of real and nominal interest rates shifted conditions from those that benefited lender-creditors back to those that favored borrower-debtors, which allowed debt/income levels to rise. This downward trend in interest rates and increase in debt burdens set the stage for the next major shift in monetary policy, which we will explore in the next chapter.



**Here are some notable events in internal and external orders, technology, and acts of nature during this 2000 to 2008 period:**

- **Despite the tech bubble bursting, the internet and its effects continued to grow rapidly while many leaders were shaken and new players grew and boomed.** Social media (e.g., Facebook and YouTube) began in 2004 and 2005. The iPhone was released in 2007, which created the “everything device” because of all the things it has on it (phone, camera, and many tools in apps). It was a period in which the internet and computing impacted just about every aspect of daily life. Americans and the US system were behind these far more than others, and then China began to copy and compete effectively.
- **Domestically, political polarization in US politics began to increase, with Democrats turning away from the more centrist 1990s toward leaders more on the left like Barack Obama (though it’s striking how by today’s standards he’s a moderate Democrat), and Republicans eventually turning away from George W. Bush for not being sufficiently populist.** As is classic at this stage in the cycle, media took sides and propaganda was used, so US media became more polarized and polarizing as well.
- **Chinese and other emerging market producers became more competitive** and most everything manufactured, from everyday goods (apparel, toys, appliances, etc.) in the 1990s and 2000s to cars and hi-tech goods now, was inexpensively produced by the Chinese. It was wonderful for the Chinese sellers who earned a lot of money and for the American and other buyers who benefited from the good-value purchases that the Chinese offered and the Chinese sellers lending the money to the US to fund its deficits. This dynamic worked essentially the same way for the Chinese as it worked for Japanese goods manufacturers and their customers. In this case, it was the Chinese who were earning and lending money (e.g., buying US bonds) and

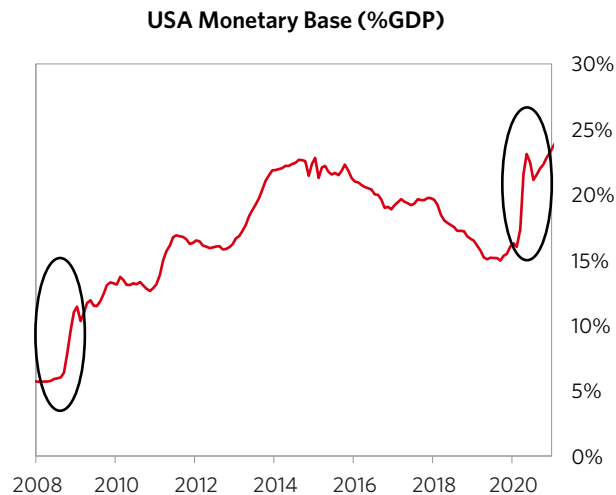
who experienced protectionism because it put a lot of manufacturing workers in the US out of work. China, like Japan before it, put a sizable amount of its earnings into its foreign exchange reserves, which led it to buy a lot of US Treasuries because the dollar was the world's leading reserve currency. That enabled the US government to ramp up deficits and debts without too much consequence (at least so far) while also helping to keep global goods inflation down, which allowed central banks to keep monetary policy easier and contributed to bull markets in stocks. This dynamic was good for the capitalists who owned the means of production and not good for the workers who were displaced.

- **The European Union and NATO continued to take in more Eastern European countries and move closer to the Russian border.**
- **Global warming continued**, with several notable impactful acts of nature, like Hurricane Katrina hitting New Orleans in 2005, raising more concerns about it.

## Chapter 11: The History and Lessons from Phase 3, from 2008 to 2020—Fiat Money and Debt Monetization (Monetary Policy 3)

In the 2008-20 period:

- There were two short-term credit/debt/economic cycles. In each, the amount of debt creation and the amount of debt monetization was greater than the one before it.



- More specifically, in late 2008 the interest-rate-driven monetary system (which I call Monetary Policy 2) couldn't be used to create money and credit anymore because interest rates hit 0% and, because that could not continue, central banks had to make up for inadequate free-market demand to buy these debt assets by printing money and buying them. As a result, a new monetary system (MP3)—where central banks buy large quantities of debt and provide credit funded with their balance sheets, which is essentially printing money, debt monetization, and quantitative easing—replaced MP2. While there are slight technical differences between these things that I won't digress into, they are essentially the same thing, which is **the central bank creating and providing money and credit to the government and marketplace to make up for an inadequate amount of private market lending. I call this Monetary Policy 3.** That began in 2008 and was the first time this monetary policy was used since 1933 (i.e., 75 years earlier). Such moves to debt monetization have occurred throughout history and are symptomatic of being in the late phase of the long-term debt cycle.
- While the 2008 crisis began in the US, it spilled over into a global crisis, and virtually all developed central banks transitioned from MP2 to MP3 (and many emerging market central banks did too). These actions pushed up the prices of financial assets and pushed down the yields for lender-creditors and created cheap money for borrower-creditors. The stimulative monetary policies that flowed through the system further benefited the rich who had financial assets. The government bailing out the banks contributed to the perception that the system favored the rich which heightened animosity toward the rich capitalists, especially those who seemed to cause the problems and got away free and made a lot of money. Ultimately, the US was able to manage its private sector debt problems and engineer an economic recovery, even as public debt kept rising (effectively kicking the can down the road; more on that later).
- The continuing increases in imports of Chinese- and other foreign-produced goods took away American jobs at the same time as new technology was taking away jobs. These forces contributed to the hollowing out of the middle class, which increased tensions between the "elites/capitalists" and the proletariat. China came to hold a lot of US debt assets and the US lost lots of jobs in uncompetitive businesses, which contributed to the creation of large wealth and values differences in the US, anti-China sentiment, and great political

and social polarity in the US. People who were hurting economically believed that the “elites” running things and the system were maximizing their profits at the expense of American workers. That, along with the 2008 debt/economic crisis and the fact that the government bailed out financial institutions and benefited those who held financial assets more than it was perceived to help the common man, also had a big impact on domestic conflict. As a result, the financial crisis led to a shift toward populism of the right (e.g., Tea Party movement) and populism of the left (e.g., Occupy Wall Street).

- Conflict between the politically and socially right and the politically and socially left became greater in response to growing wealth and values differences in most countries, especially in the United States. In the US, the rise of populism of the right, especially among the non-college-educated, non-urban white population, led to Donald Trump’s election in 2016. That changed the American approach to the US and world orders in profound ways that wouldn’t be understood for many years (and, at the time of my writing in January 2025, still are not fully understood). I will describe these changes more extensively at the end of Chapter 12. However, said succinctly, President Trump produced a shift in the domestic, international, economic, political, and geopolitical orders to be much more autocratic, top-down, rightist, nationalistic, protectionist, militaristic, and aggressive. These shifts in policies to ones that are characterized by increased confrontation and reduced levels cooperation and that are also reflected in the breakdowns of multilateral organizations and increased unilateralism are analogous to those that occurred in the periods before World War I and World War II and in many times throughout history.
- Trump’s election led to big tax cuts for companies and individuals, the appointment of three conservative justices to the Supreme Court, big cuts in government regulations, the renegotiation of trade and military support deals with other countries, big tariffs, and immigration restrictions. Cutting income and capital gains taxes and reducing regulations helped stock prices rise and the economy grow, so the unemployment rate fell to a 50-year low of 3.5% by the end of 2019.
- Then COVID, the first big pandemic since the Spanish flu in 1918-19, came along in early 2020.

These developments and their outcomes (which, for those interested, are explained in more detail in my book *Principles for Dealing with the Changing World Order*) are analogous to those in the early 1930s. They are not unexpected if one understands the Big Cycle.

**The big debt, political, geopolitical cycles and the relationships between them have been unfolding in pretty classic ways so they have been contributors to the overall Big Cycle transpiring in pretty classic ways. What we saw and are now seeing are these three big cycles transpiring along with big disruptions coming from nature (e.g., the pandemic and climate change) around advances in technologies, especially artificial intelligence (that should greatly improve productivity and be disruptive in other ways, too).**

**In Europe, events closely followed the template that I laid out previously, though Europe at the time consisted of 17 countries in the Eurozone, some debtors, and some creditors, which made the process more difficult.** The template of the cycle that I described in earlier chapters played out, in that the overly indebted countries that had their debts denominated in a currency they couldn’t print (the euro) suffered in the way I described, and the European Central Bank handled the situation in the typical way. I will use Greece as an example of how the cycle transpired and what happened to the heavily indebted countries that couldn’t print their own currency because they were tied to the euro. To show how the cycle tracked the template, I will restate what typically happens and then show what actually happened.

- 1) **The private sector and central government got deeply in debt.** In the 10 years prior to the 2008 financial crisis, Greece’s total debt as a percent of GDP increased by around 90% from 160% to 250%. The impetus was Greece joining the euro, making the country’s debt assets seem much safer (no devaluation risk, backstop from the ECB). Capital flowed in from across the Eurozone, and debt increased in every sector.

- 2) **The private sector suffered a debt crisis, and the central government got deeper in debt to help.** When the 2008 financial crisis hit, the Greek government responded with stimulus and bigger deficits that added to its debt. Because they couldn't monetize debt, this worsened rather than alleviated the debt crisis, so Greece entered a deep depression.
- 3) **The central government experienced a debt squeeze in which the free-market demand for its debt fell short of the supply of it. That created a government debt problem.** The debt crisis became an acute public sector debt crisis in late 2009 and the Greek government revealed that it had been substantially underreporting its own debt and deficits.
- 4) **The selling of the government's debt led to a) a free-market-driven tightening of money and credit, which led to b) a weakening of the economy, c) downward pressure on the currency, and d) declining reserves as the central bank attempted to defend the currency.** The obviously crushing debt burdens and the reporting fraud made Greek debt much less desirable to foreign investors, so they became sellers of Greek debt and Greece needed more stimulus to offset its depression-like conditions. Unavoidably, Greece pursued austerity, which caused the depression to get deeper and made government finances worse (as tax receipts dried up). The result was a massive sell-off in Greek debt, which raised interest rates more and worsened the debt problem even more. By 2012, short-term interest rates in Greece spiked to over 70%. Greek debt increased another roughly 70% of GDP, a combination of austerity not working and GDP declining (a dynamic I call an "ugly deleveraging").
- 5) **When there is a debt crisis, and interest rates can't be lowered (i.e., they hit 0%) the central bank "prints" (creates) money and buys bonds to ease credit and make it easier to service debt.** Actually, it doesn't literally print money; it essentially borrows reserves from commercial banks that it pays a very short-term interest rate on. The ECB stepped in with huge amounts of crisis money printing and guaranteeing of debt, and expanded its balance sheet just as the Fed did. But that wasn't nearly enough, and it became politically toxic as the more financially stable European countries decried this bailout of Greece, worrying that one way or another they would have to pay for it.
- 6) **If interest rates rise, the central bank loses money because the interest rate that it has to pay on its liabilities is greater than the interest rate it receives on the debt assets it bought.** We did not see this dynamic in this case. This typically happens when the central bank has purchased significant government debt at a fixed rate, financed via creating bank reserves that pay floating short rates, and then is forced to raise short rates because of flight from the currency or an inflation problem creating a negative net interest margin for the central bank and forcing the central bank to continue printing money to cover those losses. In the case of the European debt crisis, we saw the central bank purchase significant government debt and finance it via creating bank reserves, but in that period, Europe as a whole did not see an inflation problem or currency flight, so the ECB was not forced to raise interest rates and never had a negative net interest margin problem.
- 7) **Debts are restructured and devalued, reducing debt burdens.** It became clear that Greece needed a debt restructuring, and the money the ECB was spending on Greece was likely to lead to losses. There was even a chance Greece would leave the euro. Meanwhile, the exceedingly tight credit in Greece was crushing the economy. Ultimately, what was called the Troika (ECB, IMF, and the European Commission) engineered a debt restructuring paired with a bailout. In 2012, that restructuring reduced debt burdens by about 50% of GDP.
- 8) **Extraordinary taxes are raised, and capital flees the country and/or capital controls are imposed.** There was a bank run as smart citizens pulled money out of Greek banks. Needing money, new taxes were introduced, and there was discussion of capital controls, though none were imposed.
- 9) **There is a transition from a severely devalued currency to a stable currency.** This restructuring was enough to end the most acute phase of the crisis. Greece stayed in the euro. Reducing debt through an explicit restructuring is usually the more painful, drawn-out path. Greece took years to recover, but it did as they all eventually do. If Greece and other overly indebted countries could have printed the currencies they owed, they would have gone down the classic path that was previously described for countries in that position.

#### Here are some other key developments:

- **Regarding international relations, there were big resets economically and geopolitically that led to more allied and enemy geopolitical relationships that were analogous to those that occurred in the 1933-38 period (and numerous prior analogous periods). I won't digress into these because that would draw us into past**

**Big Cycles, but if you want to get into them, they are covered in my book *Principles for Dealing with the Changing World Order*.**

- **Climate change started to get a lot of attention.** In 2015, there was the Paris Agreement, which initiated an attempt to keep global warming below 2 degrees Celsius. Climate change is a big force that is very costly and will reshape what the human and natural worlds look like that I won't digress into because the digression would be too great.
- **Regarding new technologies, computer chips rapidly advanced, cryptocurrencies were launched, self-driving-car features started rolling out, movie streaming became more widespread, 4G (and then 5G) wireless began, reusable rocket ships began to be used, and many more advances were made—too many to sensibly digress into here and now.**

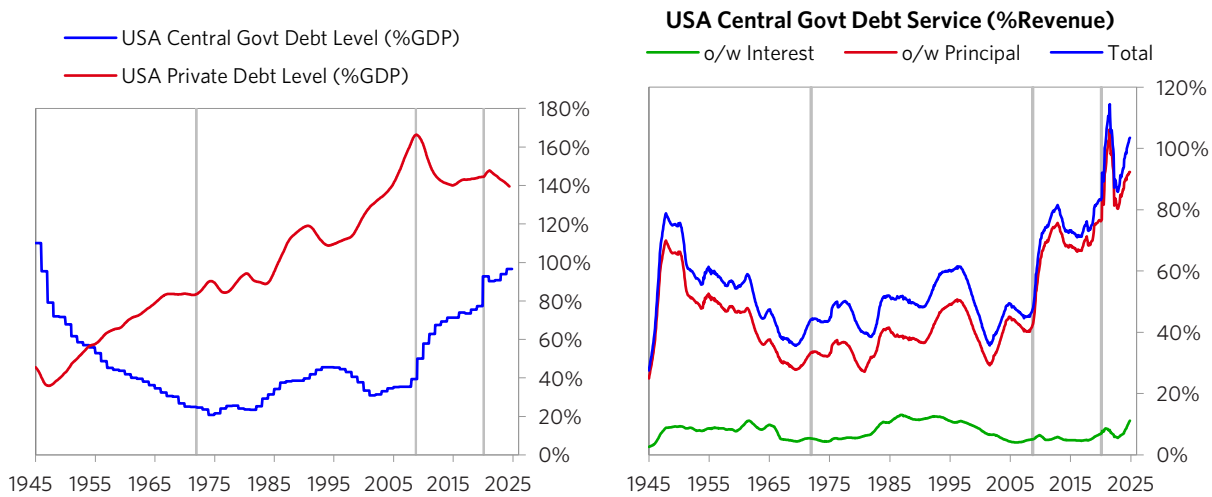
## **Chapter 12: The History and Lessons from Phase 4, Since 2020—Pandemic and Big Fiscal Deficits Monetized (MP4)**

In 2020, the world was hit with the COVID pandemic. While there is a government financial management principle in the US and in many other countries that monetary policy should be independent of fiscal policy and be targeted to pursue inflation and, in the US case, economic growth goals, because without that independence and that independent mandate there would be the politicization and degradation of the supply and value of money, the reality is that nearly every sacrosanct rule is inevitably tested by reality and starts to break down later in the Big Cycle. I call that economic-impact-necessitated change in monetary policy Monetary Policy 4 (MP4). MP4 is when there are coordinated moves between the central government and the central bank, where the government runs large deficits and the bank monetizes them. The dynamic inevitably arises when interest rate changes (MP2) and quantitative easing (MP3) no longer get the job done of helping conditions for most people and when the free-market capitalist system doesn't get the job done. Naturally the capitalist system provides capital to those who are financially well-off, holding financial assets, and able to borrow, and it doesn't provide capital to those who have the least and suffer the most. That is what happened in 2008. Because of the COVID pandemic, there was a need not just to make money and credit; there was a need to get it into the hands of specific people and organizations. Throughout history, MP4 has happened in similar conditions when there were very bad economic conditions and big wealth gaps so interest rate changes or quantitative easing alone would not do what is needed. It typically occurred late in the long-term debt cycle. In this case, it came in two big rounds.

Below are a few of the previously shown key charts brought up to date. They do a good job of painting the big picture both in terms of what has happened since 2020 and in putting what has happened in perspective within the Big Debt Cycle. As you can see, in the context of the big picture shown in the total chart, the weekly, monthly, and even annual changes seem trivial. I hope these charts help you see the more important bigger pictures.

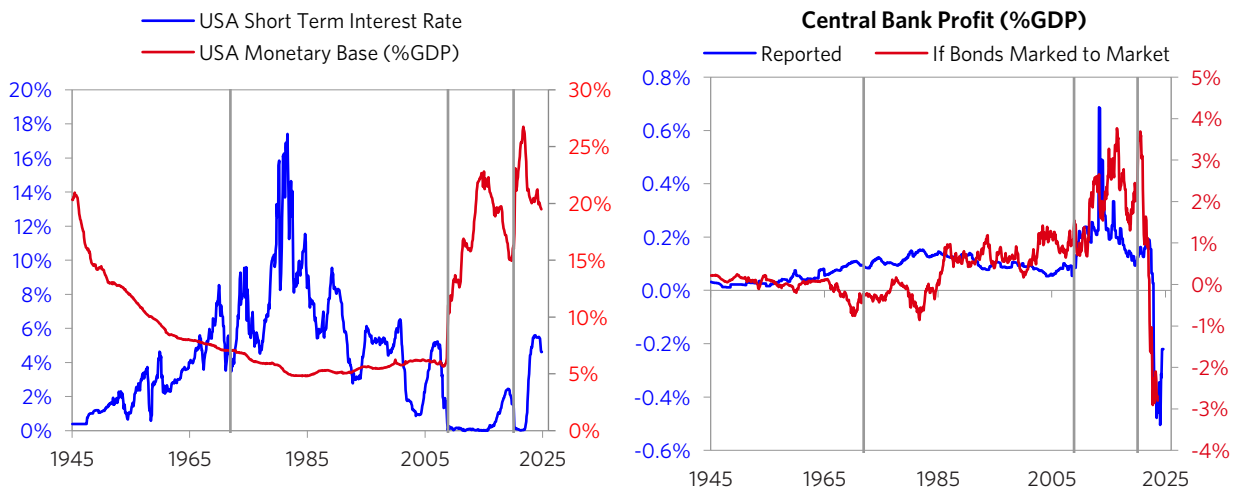
### **Debt Levels and Debt Service**

The central government spends a lot and hands out lots of money, getting itself into much more debt while relieving the private sector's debt burdens.



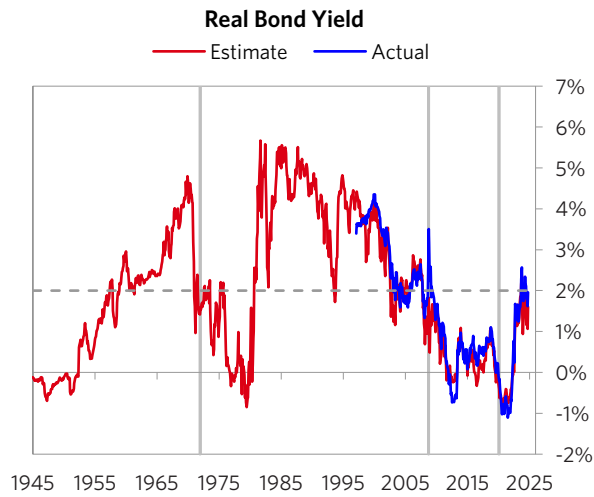
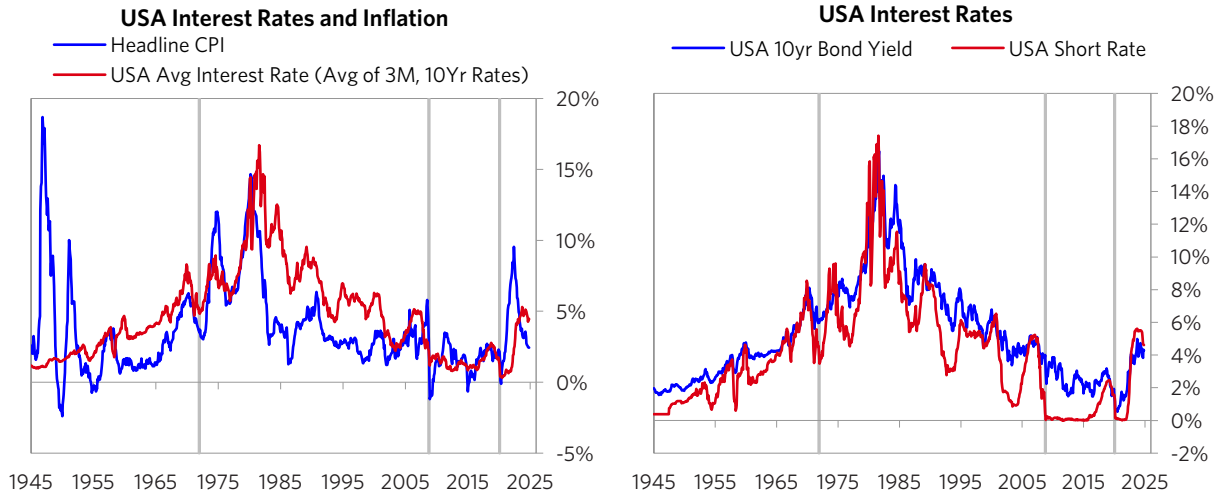
### Monetary Policy and Central Bank Health

As shown below, the Fed's printing of money and buying of the government's debt increased a lot from 2008 until late 2021, when the Fed began tightening to fight inflation. That was a pretty classic tightening in response to accelerated inflation. The tightening and higher interest rates led the Fed to lose money on all the bonds it had acquired. That is shown in the chart on the right.



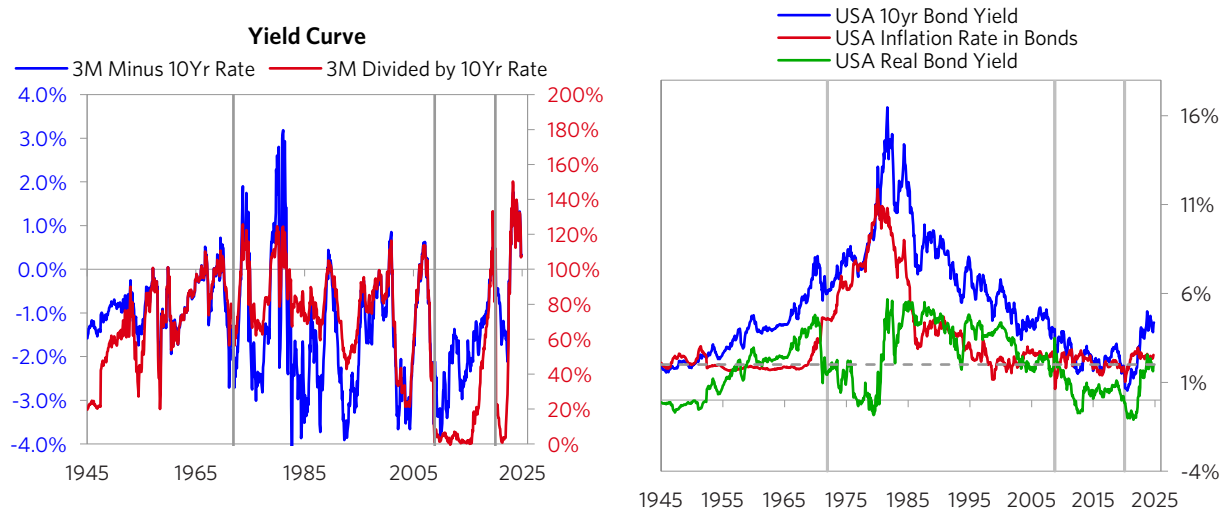
### Interest Rates

The rise in interest rates, while significant, was less significant than the rise in inflation (see the chart on the left), though it brought the real bond yield up to around its long-term average of ~2% (see the charts on the right and at bottom).



**Breakdown of Interest Rates**

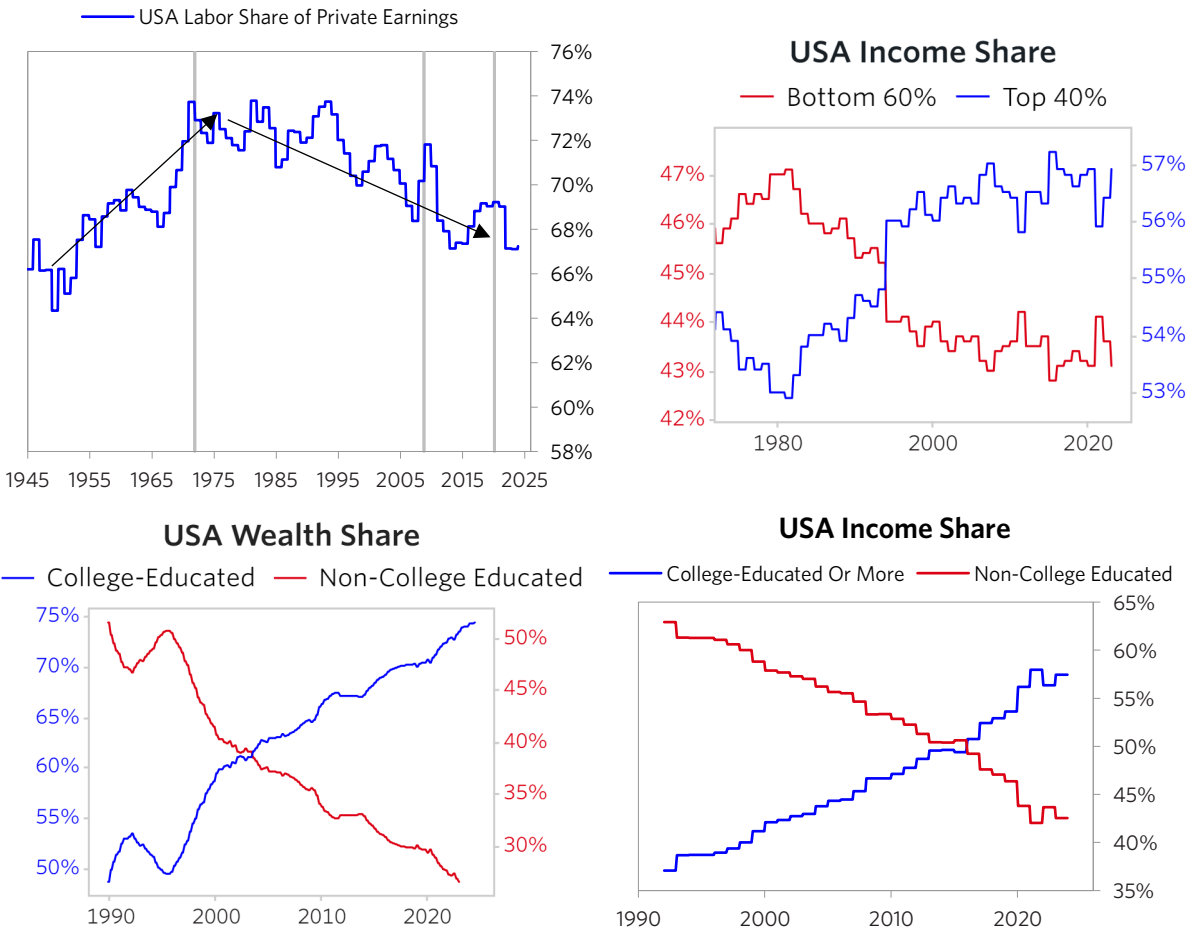
The yield curve inverted; the discounted 10-year inflation rate stayed steady at around 2% as the real yield rose to about 2%. These moves reflected the tightening.





## The Wealth and Income Shifts

Labor's share of earnings continued to trend down to the lowest level since the 1950s, and the wealth and income shares of non-college-educated Americans continued to fall, so the wealth and values gap issue grew worse.



During this period, the US population and political parties became much more divided and more extreme, and there was a change in 2020 in leadership from the Trump-led right Republicans to the Biden-led left Democrats.

I am now going to look at what happened between 2020 and the present (i.e., January 2025) in more detail. Shifting from my Big Cycle perspective down to the short-term cycle that is transpiring within the long-term Big Cycle can seem disorienting. That dramatic shift from the macro of several decades to the relative micro of years and months can seem like we are moving from big important things to much smaller and less important things, but that is not true. They are both important since the short-term things affect the big long-term things as much as the big long-term things affect the short-term things. Most significantly for this period, it was the time of the pandemic that led to huge stimulation and coordination of fiscal and monetary (Monetary Policy 4), which raised inflation and markets and redistributed wealth which produced a big surge in inflation which led to a tightening that helped to bring down inflation which led to a relatively modest easing. It was a time of continued movement to greater political polarity, the political shift to the right, and back to a Trump presidency.

More specifically:

- **This short-term cycle easing began in 2020 in response to the combination of a) a COVID-induced economic crisis, b) large wealth gaps, and c) political moves to the left via the elections of a Democratic president, a Democratic-controlled House of Representatives, and a Democratic-controlled Senate. The easing took the form of huge government spending increases that led to huge government fiscal deficits and government debt sales that were much greater than free-market lender-creditors would buy, which required central banks, most importantly the Fed, to buy/monetize the debt.** Other entities like banks and Japanese institutional investors also bought a lot of US Treasury debt. That stimulation increased the amount of money/credit/debt/spending by a lot. This massive MP4-type of coordination of fiscal and monetary policies that allows governments to borrow and direct money as it chooses because the central bank buys its debt with printed money is explained more completely starting on Page 37 of my book *Principles for Navigating Big Debt Crises*, which you can get [here as a free PDF](#) if you're interested in knowing more and seeing past cases.<sup>12</sup> That is what happened in 2020-21; as mentioned, it has happened repeatedly for similar reasons throughout history though not in our lifetime.
- **The 2020-21 debt monetization was the fourth<sup>13</sup> and the largest big debt monetization since the original big debt monetization/QE in 2008 (which was the first since 1933). Since 2008, the nominal Treasury bond yield was pushed down from 3.7% to only 0.5%, the real Treasury bond yield was pushed from +1.4% to -1%, and the non-government nominal and real bond yields fell a lot more (because credit spreads narrowed). Money and credit became essentially free and plentiful, so the environment became great for borrower-debtors and terrible for lender-creditors and led to an orgy of borrowing and new bubbles forming.** My bubble indicator, which was at only 18% in 2010, rose to 75% at the end of 2020, showing the bubbles in companies and assets that had little or no profits and were funded by selling equity and/or borrowing money based on promises of doing well in the future and speculative buying fever. It was analogous to the Nifty Fifty bubble in the 1970-72 period, the Japan bubble of 1989-90, and the dot-com bubble of 1999-2000. That decline took interest rates so low that they couldn't continue to fall and it benefited stocks a lot. I estimate that the interest rate decline raised stock prices about 75% more than they would have risen without that decline (compared to the pre-financial-crisis peak). In addition, profit margins nearly doubled on average as a result of technology and globalization, which also boosted profits and profit margins. Corporate and personal taxes declined, which also helped asset prices. **From the post-crisis lows of 2009, the nominal value of US household wealth in financial assets (i.e., "paper wealth") rose from \$32 trillion to \$99 trillion, so there was a tripling of paper wealth.**<sup>14</sup>
- **That money/credit/debt surge in 2020 produced a big increase in inflation, which was exacerbated by supply chain problems and external conflicts (the third of the five major forces that I will touch on later).**
- **That big increase in inflation led to the short-term cycle tightening by the Fed and letting their balance sheets contract by having maturing debt roll off rather than buying more of it. As a result of the Fed (and other central banks) changing their short-term debt cycle mode from easing to tightening, nominal and real interest rates went from levels that were overwhelmingly favorable to borrower-debtors and detrimental to lender-creditors to levels that were more normal (e.g., a 2% real bond yield).** Since the tightening began, US Treasury bond nominal yields rose from 0.5% to over 4% and real yields rose from about -1.1% to about 2.5%, which hurt most asset prices, particularly those with weak or negative profits and/or needs for new equity funding. Naturally that shift especially hurt prices of assets that were in bubbles. My bubble indicator fell from 75% (in a significant bubble) to 35% (not in a bubble) and the bubble stocks in the index fell an average of 75%. **As a result, the nominal value of wealth in stocks and bonds fell by ~12% in the US and the real value of wealth fell by nearly 18%, which were the largest declines since 2009.** As cash went from "trash" to "attractive" and both short-term nominal and real interest rates were brought to levels that were more attractive than they were for lender-creditors and more unattractive than they were for borrower-debtors, and the yield curve inverted, these changes had the very classic effect of lowering the present values of most

<sup>12</sup> In that book, I labeled these policies MP3.

<sup>13</sup> Counting QE1, QE2, QE3, and then QE during COVID lockdowns.

<sup>14</sup> Household wealth here is the difference between total household financial assets and total household liabilities (using data from the Federal Reserve).

investment assets' future cash flows and strengthening the dollar relative to the currencies of other countries whose central bankers were slower to tighten. In other words, the Fed's quick movement brought US dollar-denominated cash to relatively attractive levels in relation to most assets, cash denominated in other currencies, and gold, which as usual, hurt interest-rate-sensitive sectors like commercial and residential real estate, as well as low or negative cash flow bubble companies, both public and private, though public more so. For example, the then-hot "FAANG" stocks and the tech-heavy NASDAQ fell from their peaks by around 45% and 33%, respectively. Non-public market assets—private equity, venture capital, and real estate assets—were not marked down commensurately as there was a great reluctance to accept the markdowns. Write-downs and having down fundraising rounds became too painful for both the companies and the venture capital and private equity managers in these markets, so there has been, to this day, a stand-off in which sellers and buyers can't agree on prices and transaction volumes have plunged. It did not however weaken the economy as much as it typically would have because it was the central government that got into more debt rather than the private sector and it was the central bank that bought the debt and had the losses from holding it rather than the private sector. Also, the inflation was in wages and other compensation being earned as well as in goods and services being bought.

- **Then inflation fell but prices stayed high, and the Fed and other central banks eased their monetary policies which supported asset prices generally. Artificial intelligence and artificial intelligence companies became the new hot things and are expected to improve the economy and life hugely like the new hot things that produced the industrial and digital revolutions and led to financial bubbles. With these changes came great differences in which stocks, companies, and countries did well.** Also, the world capital markets changed with new types of investment products, though in the same sort of ways we saw before. For example, we are seeing new types of lending, like the development of the private credit market, which is the modern-day version of the junk bond market of the late 1970s early 1980s (though more customized, not securitized, more illiquid, and inclusive of early-stage companies). The large amount of money entering this type of lending helped to keep credit spreads down and fund more speculative activities.
- **Regarding the internal conflicts over wealth and values between the populists of the right and the populists of the left, the intensity increased in most democracies, most importantly in the US.** In the US, the divide between the political right and the political left became more extreme and the big rises in prices that came from the earlier described big fiscal and monetary stimulations by the US central government and central bank led to big price increases in goods, services, and financial assets. **In the 2024 election, this inflation and other factors such as President Biden's impaired acuity helped a) the rightist/capitalists/social conservative Donald Trump and the Republican Party to a decisive win over b) the leftist/socialist/social liberal Kamala Harris and the Democratic Party, giving Trump a mandate to undertake a big renovation of the central government and the country as a whole and prepare for some type of war with China and its allies.** The potential great conflict that would have likely occurred if there was a close Trump loss was averted.

That brings us up to where we now are.

## **The Five Big Forces: Debt, Civil War, International War, Acts of Nature, and Technology**

Every day we see news about these five forces. If you connect the dots from the past to the present, you can see them evolving along the lines of the Big Cycle template that was comprehensively explained in my book [Principles for Dealing with the Changing World Order](#), my [40-minute video](#), and my [5-minute video](#). Government debt is obviously a big and growing issue. The thus-far nonviolent civil war between the rightists/capitalists/MAGAs and the leftists/socialists/communists/woke is continuing to intensify, and in the 2024 US election the rightists/capitalists/MAGAs beat the leftists/socialists/communists/woke. Simultaneously and relatedly, the international war, particularly between the United States and its allies (i.e., the allied powers) and China and its allies (i.e., the axis powers), is intensifying. Similarly, the acts of nature force, most importantly climate change, is intensifying, and technology, especially AI, will have a big impact, both good and bad, that we won't be able to imagine. These issues are interrelated. Most importantly, the internal fight within the US and the external fight

with China will be affected by the technology war and the economic war (e.g., the need to raise military spending). For previously explained reasons, this looks quite like the 1936-38 period.

**Because of the importance of China, I will now briefly review its whole Big Cycle since 1945 (when the new world order began) to 1949 (when its new domestic order began). Then I will look at Japan's Big Cycle focusing most on how its Big Debt Cycle unfolded there because it provides another good case study to understand to gain the valuable lessons it offers. After that, I will look at what the key measures and calculations show in an attempt to peek ahead, and I will conclude with some suggestions.**

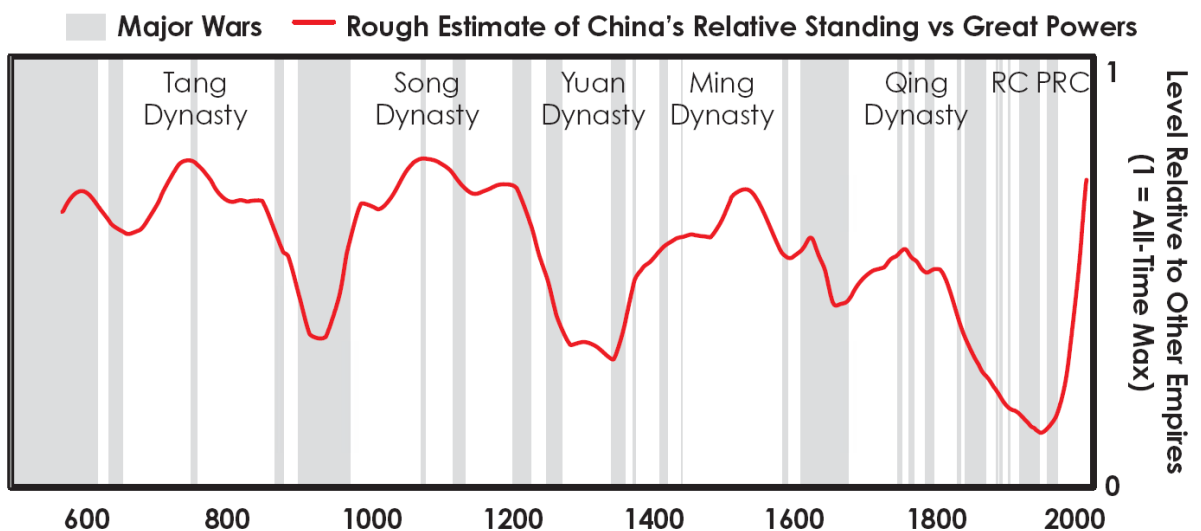
## Chapter 13: China's Big Cycle from 1945-49 Until Now in a Very Tiny Nutshell

*This chapter will take you about fifteen minutes to read and it explains how the Big Cycle has played out in China, bringing you right up to the present, so I think it is worth the read for those interested in that.*

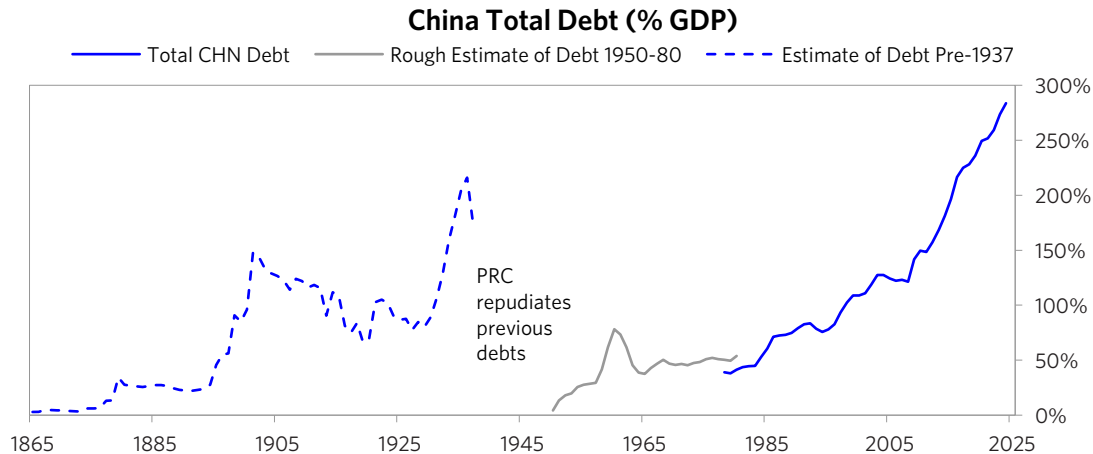
To put China's history in the context of its Big Cycle, I will summarize what has happened since the start of the new world order and China's domestic order in the 1945-49 period with a very brief look at what happened before then.

### Before 1945

To look at China before our current Big Cycle, I will first draw your attention to the following chart that shows the Big Cycles of China back to the year 600. This measure shows the estimated relative strength of China using many measures of strength as described in *Principles for Dealing with the Changing World Order*. Having studied these cycles, I have found them to be consistent with the Big Cycle template that I am touching on in this study and I comprehensively explained in that book.



**In the chart below, you can see China's Big Debt Cycles since 1865, which is 26 years after the Century of Humiliation began until now.** This 110-year period of humiliation (as the Chinese call it) was the period in which foreign powers humiliated and exploited China, starting in 1839 with the First Opium War and in 1949 with Mao and the Chinese Communist Party coming to power and the founding of the People's Republic of China. As you can see from this debt cycle, big debts were built up, wiped out, and built up again. As is typical, the debt wipeout corresponded with internal and external wars (in 1945-49); then there was a new order, and debts were built up again. However, through most of these years Chinese money and debt were not considered a good storehold of wealth.



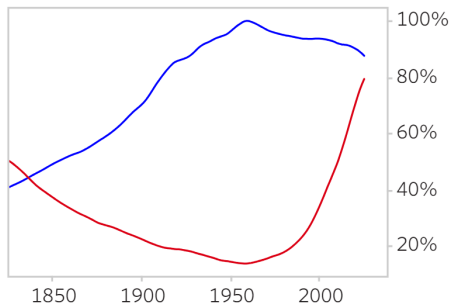
**While I will not delve into China's prior Big Cycle that encompassed the Century of Humiliation, I do want to touch on it and convey that it profoundly affected Chinese leaders' perspectives on foreign powers and what is now going on domestically. That part of China's history is deep in the Chinese leaders' psyche and has led to a belief that the way foreign powers are now fighting for their economic interests is broadly analogous to the way they did during the Century of Humiliation.** More specifically, China's leaders see the US operating as a hegemon to control the world order to serve its self-interests and trying to contain China in the part of the world that the US is not part of. Most significantly, they now see America's handling of Taiwan as being even more intrusive than Americans saw Russia's influence in Cuba in the 1960s because from their perspective Taiwan has been "indisputably and consistently" recognized as part of China by all the world's powers since the end of World War II. Of course, Chinese leaders know that Taiwan is part of China but has not been incorporated back into China. There is no question that Chinese leaders expect to eventually take control of Taiwan and parts of the South China Sea. In contrast, most Americans see China as a big and growing threat to the United States and the existing US-led world order, and they see the Chinese as being ideologically threatening communists who autocratically control their people and who are in a great ideological war with its capitalist, democratic, Abrahamic (i.e., Judeo-Christian-Islamic) approach. Some in both Washington and Beijing see this conflict as being the last and biggest great religious-ideological-economic-military war. Of course, this relationship is complicated and there are at least two sides to this story, which I won't go into because it would be too large of a digression. I just wanted to make clear that Chinese leaders' historical perspective has a big effect on how they think and what they do. More broadly, they are very aware of big cycles and what caused them in terms of all five of the big forces that I've described.

**The most important things to know are that China has had a rise that was more powerful than any other country in history to become a great power that is nearly comparable in power to the United States and that the United States and China have entered into a period of great power conflict.** The next two charts show my aggregate readings of relative powers since 1825 and my US-China conflict gauge since 1963. As you can see in the first chart, China's relative power fell a lot during the Century of Humiliation and then rose a lot thereafter, so that it is now close to rivaling the US. This is leading to a classic great power conflict between the US and China and their allies. On my website, [www.economicprinciples.org](http://www.economicprinciples.org), you can see much more detail on the measures that led to this reading for China.

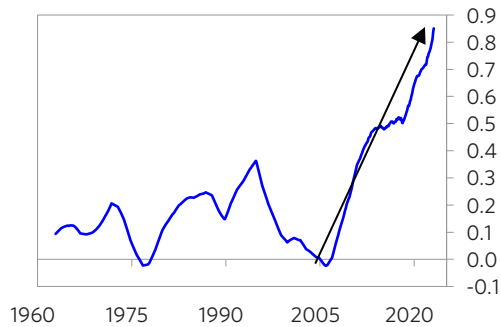
## Country Strength Indices

(Indexed to Empire Peak)

— China — United States



## US-China Conflict Gauge



**Here is my very brief description of what has happened in China since 1945.**

**In 1945, World War II ended, which led to the creation of the new and current world order, and in 1949, China's civil war ended, which led to the creation of the new and current domestic order.**

**From 1949 until 1976, China was a strictly isolated communist country run by the revolutionary leader Mao Zedong and his chief administrator, Zhou Enlai.** During those years, China recovered slowly from World War II and its civil war because it was encumbered by rigid and unproductive communist economic policies, draconian controls that ensured that Mao and the Chinese Communist Party remained in power, and isolation from the rest of the world. In Big Cycles, it is typical for those who win power in a civil war to suppress the opposition to consolidate and solidify their power over the opposition due to fears that they will be overthrown. In Chinese dynasties, secret and violent overthrows of leaders have been frequent that they are viewed as a constant threat. That went on throughout Mao's life. Mao had many enemies, most importantly capitalists from within China and the Soviet Union (starting in the late 1950s) from outside it. Marxist-Leninist communist principles and isolation from "foreign devils" shaped what China did and didn't do during the 1949-76 period. During Mao's reign, China's development fell behind the rest of the world's and there was a lot of suffering, especially in the Great Leap Forward and the Cultural Revolution. As far as dealing with foreign powers was concerned, Mao's greatest fear was the Soviet Union, which became increasingly threatening in the 1960s and especially in the 1970s. As has typically been the case throughout history and is conveyed in the adage "the enemy of my enemy is my friend," the common enemy brings countries together, which was true in this case, in which the common enemy of the United States and China was the Soviet Union. That led to the visits to China first by Henry Kissinger and soon after by President Nixon. Because I knew both Henry Kissinger and Ji Chaozhu well, I learned a great deal about both sides' perspectives, which I won't digress into here but will share in a book that I'm writing on China. Suffice it to say that common interests and a common enemy brought them together in 1972.

**Mao and Zhou died in 1976.**

**As described in Chapter 10, Deng Xiaoping came to power in 1978 and changed just about everything with his "reform" and "open door" policies, which introduced a much freer, market-based economic system that brought in foreign talent and capital to enable the Chinese.** He distinguished the new way with statements like "it is glorious to be rich" and when asked about his move to a more market-capitalist direction, he said, "It doesn't matter whether a cat is black or white as long as it catches mice." This was the recognition that the market-capitalist systems can "catch mice" (i.e., make riches) and that it is best to get rich and powerful first and then work toward "common prosperity." **These policies led to China having huge economic advances that changed not only China but the whole world. China went from being a poor, weak country to being a very strong one.**

**I saw all this up close from 1984 until now and, through my contact, got to see things through Chinese leaders' eyes.** I started to go to China in 1984 as a guest of CITIC, which was the only "window company" (because it could deal with the outside world in a capitalist way). They asked me to teach them about the world's capital markets. China didn't have any money at the time so I didn't go for that; I went at first because I was curious, and I kept going until now because I loved the people and culture, and I could have a good impact on the country's markets and economic development. That gave me an invaluable education as well as lots of enjoyment, so much so that I don't dare describe it entirely because it would be too great a digression. What I am now going to describe is through the lens of my experiences. **I watched that combination of powerful economic reform and opening up to the outside world take China from:**

- 1) a classic unproductive communist country to**
- 2) an effective "socialist market economy" to**
- 3) the development of its capital markets and its version of capitalism to**
- 4) the forming of a classic debt bubble that led to**
- 5) a classic debt bust of the type that those who have their debt denominated in their own currency and have most of the debtors and creditors as their own citizens have.**

More specifically, China experienced a classic upward swing in the Big Cycle that took China's people from terrible poverty to much-improved living standards, with many people and the country as a whole gaining great riches and powers. At the same time, there were big increases in indebtedness and developments in the capital markets that created big wealth gaps and a bubble. **I witnessed up close China go from grappling with its poverty and geopolitical weaknesses to creating its market/debt reform and open-door policies, which created great increases in its riches and geopolitical power, to grappling with these greater wealth and geopolitical powers because with them came big wealth and opportunity gaps and big domestic and international conflicts.**

**In the Deng era, I saw the Big Cycle unfold up close as follows:**

- **China brought its inexpensive labor and high productivity gains to provide the world with attractively priced manufactured goods.**
- **The US and most of the world liked getting attractively priced manufactured goods on good terms, especially because China used a lot of the money it earned to lend money to Americans who bought the merchandise, which led to the following:**
- **China's income, wealth, and power increased greatly. At the same time, the US overborrowed.**
- **In 2008, the US had a big debt crisis that put China in the position of not knowing if a large portion of its debt assets would be paid back and questioning the United States' financial strength.** I was in the midst of that situation and must say that the Chinese side handled the debt crisis with grace and understanding.
- **In 2008 the Group of 20 (G20) countries, which was formed to be a more realistically representative group of powerful countries than the G7 given the shifts in world power, had its first summit to deal with the global financial crisis. They agreed to be very stimulative, so China and virtually all countries increased the credit they made available, which improved conditions, increased wealth gaps, and raised debt levels relative to income levels.** As explained earlier, in the US the widening wealth gaps and economic suffering of those left behind created a change in sentiment to blame the Chinese for their job-loss problems. Those American workers who were most adversely affected were the non-college-educated men who Donald Trump appealed to. **At the same time, American companies complained that they were not allowed to fairly compete as equals in China and that the Chinese were stealing Americans' intellectual property.**
- **China's skills and powers continued to grow, which gave China the resources to develop its military, geopolitical influence, and technological powers, which led it to become more assertive and seemingly threatening. In 2009 China asserted that the proper boundaries of its territory were far beyond what other countries claimed they were, pointing to an old map that demarcated the boundary with a nine-dash line.** Though in 2016 the Permanent Court of Arbitration ruled against China's claim, the dispute continues to today.
- **President Xi and the new leadership team came to power in 2012. The main goals of the new leadership team were to reform the economy and eliminate corruption. Because of my expertise and my long and trusted relationships, I was able to participate in the discussions about these things in the third plenum (the**



**new government's big planning meeting after the top people are appointed). I experienced a very open and collaborative environment in which key issues were discussed, and we exchanged thoughts about them openly. Reforming the economy meant modernizing it to be more market-driven.** For example, back then six major banks lent money to state-owned enterprises that were implicitly guaranteed by the government that had the printing press to guarantee them, and there was little lending to small- and medium-size enterprises. The leadership wanted to change that, so they sought to develop capital markets that improved access to borrowing, lending, and investing. I was closely involved with that, so I saw how those responsible for it thought about it and what they did. I found that for most of Xi's first five-year term, there was a) an openness to outside thinking, b) a strong desire to further reform the economy by making it more market-driven and taking actions to build and reform the capital markets, and c) strong action taken to eliminate corruption. The senior leaders chosen were the ones who were inclined to do those things. Of course, how to do these things was debated, and some people benefited from the changes while others were hurt by them, which created divisions. I saw the following happen:

- **Late in Xi's first term there was a movement to consolidate political power around him via a move to "core leadership."** If you think politics in the United States is brutal, you should see politics in China. This became most clear in the leadership changes that accompanied the shift from the first to the second five-year term under Xi.
- **Up until then there were remarkable accomplishments—by many measures the greatest in human history. In the years since I first started going to China in 1984, China's per capita income increased by 20 times, the average life expectancy increased by 12 years, and the poverty rate fell from 81% to less than 1%.**
- **In 2015, Xi put out his 2025 plan, which described the need for China to rise and dominate certain industries. This was viewed as aspirational by the Chinese and threatening by the Americans. China could no longer "hide power." Also, China became more threatening as it grew a lot in world trade, as its riches grew, as it asserted itself more geopolitically, and as it "stole" intellectual property. At this time, Americans began to blame China for their economic problems and viewed China as a greater threat.**
- **Due to middle-class job losses in the US, which were attributed to Chinese imports and China's greater assertiveness internationally, the pendulum of sentiment toward China swung from positive to negative.**
- **When President Trump came to power in 2017 and President Xi began his second term in 2018, the great power conflict began in earnest,** starting with trade negotiations that evolved into tests of power and a type of cold war. Then in 2019-20, COVID emerged. At the same time, China's debt bubble and wealth gaps grew, and relations with the US worsened, so there was a classic convergence of big debt/financial, internal order, external order, acts of nature forces into a risky mix. Also, the Taiwan issue was (and still is) a very big contentious issue because China expected the One China unification promise to be delivered on while there seemed to be movement toward more independence. This has been intensified because most of the advanced computer chips in the world were (and still are) produced in Taiwan, and whichever country controls them controls the most powerful technology in the world. Seeing all those contentious domestic and international issues evolve, in addition to his understanding of history, led President Xi to say that there is a "big 100-year storm" on the horizon.
- **In 2020, much of China was shut down due to COVID, which raised some internal ire about how it was being handled.**
- **In 2021, a bit more than halfway through Xi's second term, China's domestic debt bubble burst. Xi emphasized the importance of "common prosperity" and did not like how rich businessmen were arrogant and exerted influence over how China was being run, so the government took some seemingly arbitrary actions that were not consistent with the type of rule of law and traditional property protections that investors thought were important.**
- **At the beginning of President Xi's third term in October 2022, China's leadership shifted from reform-minded globalists to loyal communist nationalists with tighter controls over possible opposition, and it shifted from being highly free-market-oriented with capital markets flourishing to being more Mao-like communist as internal conflict and the international great power conflict intensified.**
- **At this moment, China is now a country that is 1) in a big debt crisis while it is turning to more traditional communist economic policies at the same time as there are great advances continuing, while 2) there is increased internal conflict that is being contained by more strict, autocratic policies directed by the president, while 3) there is increased international conflict with the United States and great changes in the**

world which China is increasingly influencing, while 4) climate change is happening and likely to have a big effect on China, while 5) it is vying to lead and win a technology war that neither China nor the United States can afford to lose.

- **Now, the Trump administration has come into power in the US, which also has 1) big debt issues, while 2) there is increased internal conflict leading to more strict, semi-autocratic policies directed by the president, while 3) there is increased international conflict with China and great changes in the world order with the US under Trump shifting from being a global leader to becoming an “America First” nationalistic participant in the changing world order, while 4) climate change is likely to have a big effect on it, while 5) it is vying to lead and win a technology war that neither China nor the United States can afford to lose. So, we are now seeing a squaring-off of these two great powers, along with their allies lining up behind them and their ideologies, which looks a lot like what we saw in the mid to late 1930s when the world was at a similar stage in the Big Cycle.** What will happen in the US and China and the world will be another test of the relative strengths of these two great powers and their two very different approaches and systems. These two great powers are now in a war that fortunately for the world hasn't yet turned militaristic. This is shaping up to be the greatest great powers conflict ever. A very senior Chinese leader many years ago explained to me how differently these two sides fight war; he explained to me how Western countries follow a Mediterranean approach to war, which is head-on, while the Chinese use a much more subtle, deceptive approach along the lines of what was described in *The Art of War* by Sun Tzu, which was written about 2,500 years ago. Over my many years and through my intimate contacts in China, I learned about the power of such timeless principles that affect the Chinese leaders' approaches to dealing with the Chinese people and the outside world.<sup>15</sup>

**In ultra-brief summary, below I look at what happened in China vis-à-vis my Five Big Forces template:**

- 1) The Big Debt Cycle force led to China's debt rising relative to incomes, though not relative to liquid assets until 2009 (coming out of the GFC). Then it, especially local government, corporate and real estate debt, started to grow into a bubble that burst in 2021, which began a deleveraging. Like Japan's, most of China's debt is denominated in its local currency, which allows it to engineer a “beautiful deleveraging,” which Japan failed to do. We don't yet know whether China will manage this well, though it now appears to me that China has been slow to deal with it and is in the late part of the Big Debt Cycle that is most analogous Japan's in 1990.
- 2) The internal conflicts and internal politics force led the government to tighten controls, leading to an environment of more fear, which has slowed decision making, which has chilled the economy and hurt

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<sup>15</sup> For example, another timeless guiding principle is Da (which means bigness/grandness) Tong (which means unity, harmony, and coordination), which dates back to Ancient China (around the time of Confucius). It describes how good things should be shared by all, leaderships should operate for the public good rather than for their own interests or the interests of any group, resources should be distributed equitably, and people should live in harmony. These are essential things that they will strive to get at all costs. How do they strive for them? The approaches are conveyed in 1) Confucianism (which is a series of ways of operating to have harmony through clear hierarchy and moral leadership in which the leaders put the society's well-being ahead of their self-interest and put education, meritocracy, family, quality relationships, and paternalistic governance as priorities; it was formed around 500 BCE) and 2) legalism (which emphasizes very strict rule of law and pragmatism over morality; it was formed around 250 BCE). I learned that running China as a hierarchical family is important (e.g., the word “country” in China is made up of two characters that are “state” and “family”). Of some but lesser influence are Taoism, which emphasizes harmony and the nature of all things, and Buddhism, which emphasizes harmony among people and all things, the acceptance of how things are, and the lack of value of materialism. By understanding such principles and how deeply rooted they are, I could understand the leaderships' perspectives and their system better than if I didn't understand such things. For example, I could understand why they find Marxism (which to them represents common prosperity), autocratic leadership, and the desirability of people in the society to know their place and to faithfully follow the leader (which they believe is required for order to exist), unless the leader fails them which will be shown in great disorder that will lead the leader/emperor to lose “the mandate of heaven” and be overthrown which will change the dynasty/order, and I can understand how they can find capitalism and individualism antithetical to their beliefs because they see it as selfishness that will fragment people and lead to disharmony and disorder. I am not commenting what I think of Chinese approaches versus American or more generally Western approaches other than to say that it seems to me that humanity has struggled with their relative merits (i.e., the relative merits of capitalist self-interest and democracy and communist common interest and dictatorship) and has swung back and forth between different versions of them for all recorded history. I also think that the Chinese core values about how people should be with each other are more similar to the core values that Christ and Christianity espoused than is generally recognized and that both of these are quite different from those of capitalism when capitalism is taken to an extreme. I also know that capitalism has been a far more effective approach in producing prosperity, including broad-based prosperity, than the other approaches, though that approach has tended to operate in the Big Cycle way that has produced the booms and busts that we are looking at comprehensively in this study.

capital and people flows, which has contributed to economic slowness in China. It has moved about halfway back toward Maoist-Marxist communist policies.

- 3) The external conflict force led to the classic great powers conflict with the United States, which has hurt flows of trade, capital, and people and led to greater military preparation and risk.
- 4) The acts of nature force took the form of the COVID pandemic problem that started in late 2019 and continued through 2022, which strained the population's satisfaction for how leadership was handling it which contributed to the government increasing controls. China also used its remarkable inventiveness, its government-directed economic policies, and its advanced manufacturing abilities to make such great strides in solar and wind power that it has become the world's most cost-effective producer of these items, which is another story that I won't digress into.
- 5) The technology force led China and the US to both make advances in a number of new technologies, most importantly in advanced AI, with China seemingly having fallen behind the US in the most advanced chips while at the same time excelling in some other areas, most obviously in advanced manufacturing.

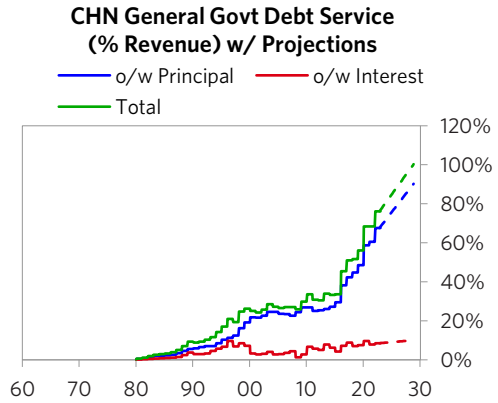
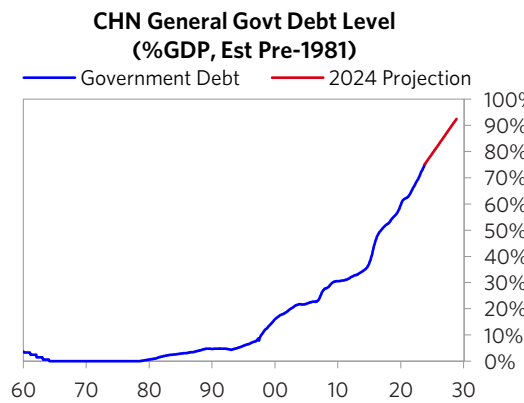
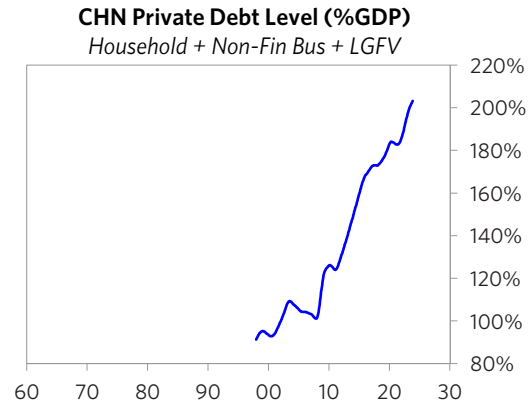
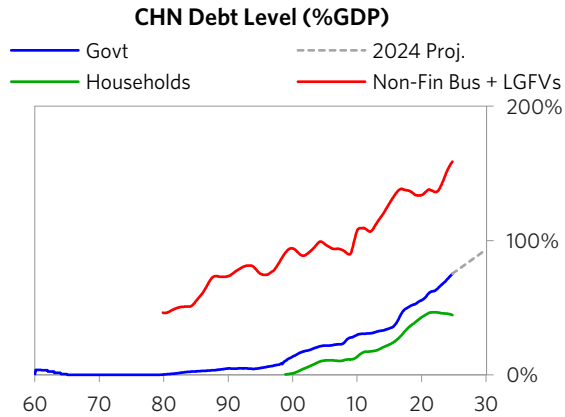
So, in brief, in recent years four out of the five major forces (i.e., debt/economic, internal conflicts, international conflict, and the acts of nature) have become increasingly threatening to China, and the fifth, the technology force, appears to be a mixed picture because great advances have been made while China looks to have fallen behind in some existentially important areas. It seems inevitable that the US and China will face another test of their relative powers and their approaches to a) capitalism and democracy versus b) communism and autocracy.

### **China's Big Debt Cycle in Some Charts**

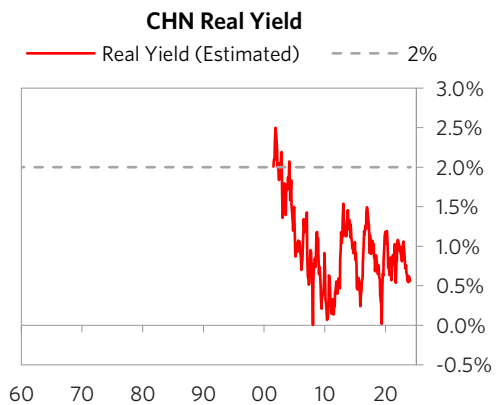
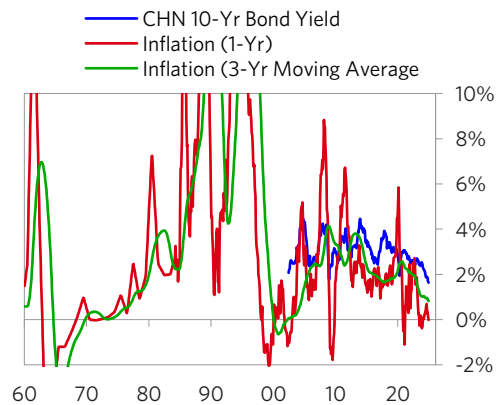
I am now going to show you a bunch of charts that do a good job of painting China's debt picture, but I won't get into an analysis with a commentary because a more complete proper analysis would be too much of a digression for now. Also, notably not all the debts are properly accounted for, so these charts are meant to just be broadly indicative.

As shown, China is in the part of the cycle where the non-central-government debt burdens have become excessive and a problem so that the central government and the central bank will have to come to their aid. Fortunately, most of the debt is denominated in local currency and most of the debtors and creditors are domestic so that the central government and the central bank have much greater ability to manage this situation than if they weren't. However, China's currency (the renminbi) is not a widely held reserve currency, so not an effective storehold of wealth. Ideally, Chinese policy makers would have both the ability and the courage to swiftly engineer a "beautiful deleveraging." However, as previously explained, such adjustments are initially painful because they cause great shifts in wealth and, if not balanced properly, can just shift the debt burdens, worsen the long-term central government debt burdens, and/or so severely undermine the value of the currency as to do great damage to the capital markets and through it to the economy. The Japanese case, and the next chapter on it, provides some valuable lessons for them (as well as for other policy makers, investors, and businesspeople).

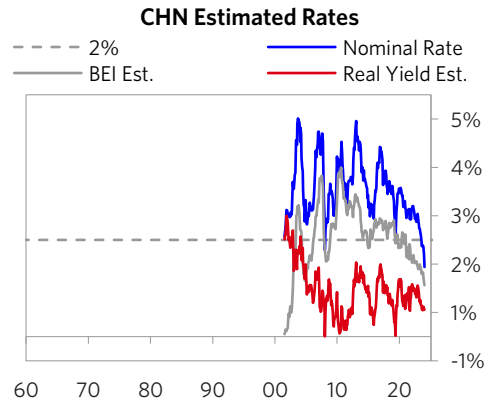
As shown below, China's debts are reaching new highs, even as the economy is weaker than desired. That's been the dynamic in Japan over much of the last couple decades as well.



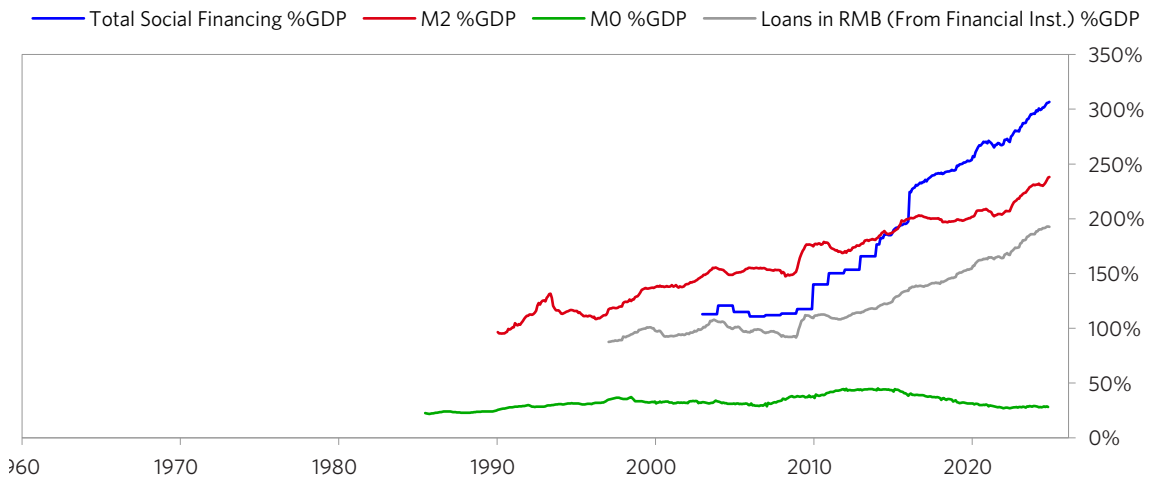
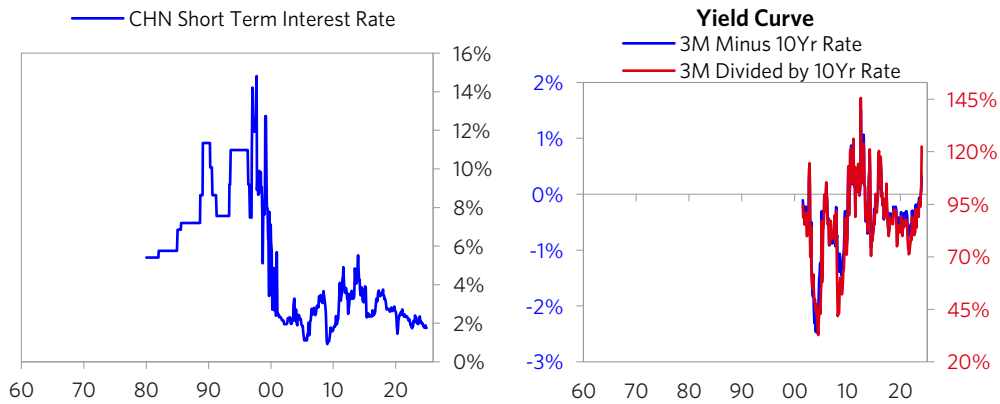
The chart below on the top left shows the levels of 10-year bond yields relative to the stated one-year and three-year average headline inflation numbers. Actual deflation in both items and in investments held has been worse than is shown here. As shown in the chart at bottom, nominal government bond rates are approaching zero, so other “non-conventional” fiscal and monetary policies will likely have to be used. Also, as shown in the top-right chart, real bond yields are about 0.5%, so a) they are relatively unattractive in a normal environment but b) still relatively attractive in relation to a deflating economy with falling asset prices, and also c) relatively unattractive relative other countries’, especially the US dollar bond market’s interest rates.<sup>16</sup>



<sup>16</sup> China does not have inflation-linked bonds, so I am showing an estimate of real yields based on nominal yields and an estimate of market 10-year inflation expectations.



As shown below, the yield curve (as of January 2025) is inverted, which makes cash relatively attractive at a time when that encourages a holding of cash which leads to a “pushing on a string” issue. I previously conveyed my thinking about this in Chapter 1 so I won’t repeat it. Also as shown, various measures of liquidity (total social financing, money supply, total loans from the financial sector) continue to rise without producing a rebound in real economic activity, another sign of “pushing on a string.”





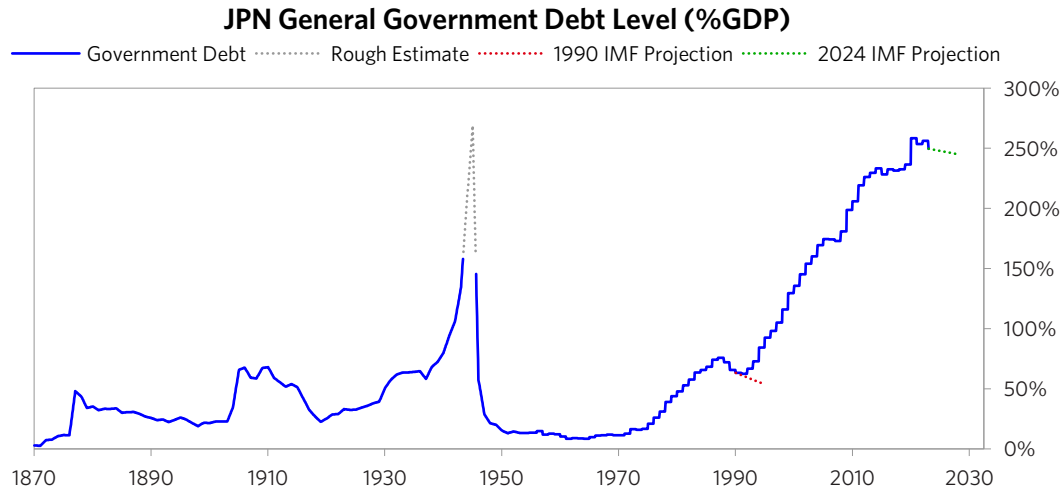
## Chapter 14: The Japanese Case and the Lessons It Provides

*This chapter will be relevant to those who are interested in studying the mechanics of Big Debt Cycles and it probably won't be of much interest to those who are not. That is because it shows how a heavily indebted reserve currency country handled its debts with reference to the earlier-described template. Most importantly, this Japanese case study shows the Big Cycle in Japan transpiring in the very classic way that I described, with the cause/effect relationships working as I described. In this case study, you will see that for 23 years Japanese policy makers did the exact opposite of what I described should be done to execute a beautiful deleveraging—i.e., after their debt bubble burst they did not restructure the debts for nine years and they didn't drive interest rates below inflation rates and nominal growth rates for 23 years, so they had deflationary depressing conditions until 2013 when there was a fiscal stimulation accompanied by a great debt monetization and great depreciation in the value of their debt assets and currency. While this Japanese case study tells a very interesting story for those who are interested in seeing how the economic machine works, it does get a little technical which is good for those who want that, but those who don't can skip it by just reading the highlights in bold which will take only about five minutes.*

Japan's story, like China's story, is a very interesting one that extends back to its Big Cycle before the one that began in 1945. To put Japan's history into the clear context of its Big Cycle, I will summarize what happened since the beginning of the new world and domestic orders starting in 1945 with a very brief look at what happened before 1945. I'm doing that because, as with the China story, the Japan story since 1945 would be greatly lacking in context if we didn't at least briefly touch on the Big Cycle dynamics of the 100 years before.

In brief Japan, like China, was isolated from the rest of the world until the foreign powers—in Japan's case, US Commodore Matthew Perry and his American fleet—came and demanded to trade with Japan. Because the foreign power was greater, that led to the collapse of Japan's 250-year-old domestic order, which was under the Tokugawa (family) shogunate (government headed by a family). Because of the realization that the foreign, more modern approaches were better, that government was replaced by a new government in 1868, which largely copied the Western powers' approaches (similar to what Deng Xiaoping did). It was a constitutional monarchy that was led by a new emperor (Meiji). That led to the modernization of Japan, achieved largely by following the Western style of education, economy, and military. These policies of reform and opening up that copied the policies of the more modernized Western powers, like those in China under Deng, led to Japan becoming a great power. Then it fought and defeated its two rival regional powers—China in 1894-95 and Russia in 1904-05 which was followed by the annexation of Korea in 1910. Then in 1914-18 it decided to take advantage of Germany's fighting in Europe in World War I to take over German territories in Asia. In the 1930s, it invaded and took over China's Manchuria (1931) and more of China (1937). Then it got into a geopolitical conflict with the United States that had similar trade and sanction conflicts to the US-China conflict today, with oil then being like chips now. This led to Japan attacking the US naval fleet at Pearl Harbor, which led to a war with the United States that Japan lost due to the United States inventing a great new and powerful technology that could be used for peaceful and war purposes—nuclear power. Because of Japan losing the war, all Japanese money and debt was destroyed, and Japan was occupied and reconstructed by the United States from 1945 until 1952.

The chart below shows the total debt-to-GDP ratio going back to 1870. It shows both the Big Debt Cycle prior to 1945 and the one since. As you can see, there was the big run-up in debt in the 1930-45 period before and during the war, the debt wipeout that brought it down to low levels until 1970, the big debt bubble leading to the debt bust in 1989-90, and the rise in that ratio until recently. That is what the Big Debt Cycles looked like since 1870. As is normal when looking at the Big Debt Cycles, the short-term debt and economic cycles are imperceptible.



## Since 1945

**In brief, from 1945 through 1990, Japan rebuilt itself to become the second greatest economic power in the world and in the process built up a huge debt burden that burst in 1989-90, which has had a huge weakening effect on Japan ever since.** After World War II and with the US's blessing, Japan chose not to build up its military power and instead chose to be a protectorate subject of the United States. I will now focus on the time from the debt bubble bursting until now because that is the most relevant period to understanding the part of the Big Debt Cycle that this study is focused on. The lessons that examining this part of the Big Debt Cycle provides in helping us understand other cases—most importantly the current cases in the United States, China, and Europe—are very valuable. Since I am focused on the deleveraging part of the Big Cycle, I won't cover the 1944-90 period and will focus on the post-1990 period.

## The Big Debt Cycle Since 1990

**The Japanese government's handling of its debt problem from 1990 until 2013 exemplified exactly what not to do. It was the exact opposite of what I described should be done to execute a beautiful deleveraging even though it had the capacity to execute a beautiful deleveraging because almost all of its debt was denominated in its local currency and almost all of the difficult debtor-creditor relationships were between Japanese parties, plus it was a net creditor to the rest of the world. More specifically, policy makers did not restructure their debts so the debt burdens lingered on bank and company balance sheets making them "zombie institutions," they held to employment and cost policies that were rigid so they didn't effectively cut costs and adapt, they didn't make interest rates low in relation to both nominal growth rates and inflation, and they did not monetize their debts until after there was deflation and interest rates were near zero in 1995. For nearly two decades, the amount of fiscal and free-market policy adjustments and the amounts of monetary stimulus and debt purchases were woefully insufficient to engineer a beautiful deleveraging. As a result, until 2012 Japan had continuous deflation and economic stagnation as companies and people didn't have the previously described financial conditions to get this debt burden crisis behind them. The Japanese government did not deal with its non-performing loan problem until 1999 (so for nine years after the debt bubble popped) when the government finally forced the banking system to restructure its debts and injected huge amounts of capital into the banks, and it didn't monetize debt and bring interest rates significantly below nominal growth and inflation rates until 2023. Additionally, the demographics of Japan's aging population (e.g., in 1990, 12% of the population was over 65 and 69% of the population was working-age while now 29% of the population is over 65 and only 59% is working-age).**

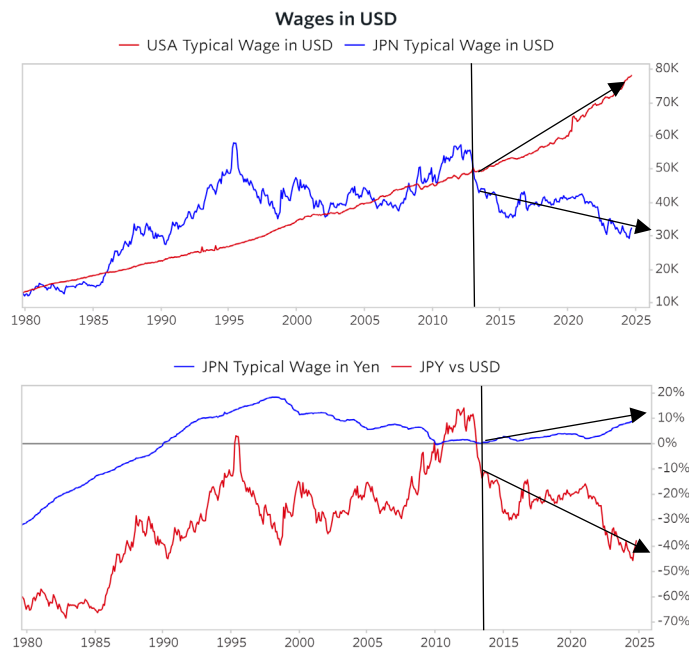


Fiscal and monetary policies changed greatly and appropriately when BoJ Governor Kuroda and Prime Minister Abe came to power in late 2012/early 2013 and initiated their “three arrows” policy to 1) increase the money supply, 2) boost central government spending, and 3) enact economic and regulatory reforms to make the Japanese economy more competitive, which, as previously described, are classically the best policies to negate deflationary, depressionary forces. As a result, from 2013 through 2019 there was not deflation and there was low positive growth (0.9% per year) and the beginning of a healing period, though the deflationary and depressing psychological conditions lingered. The psychological overhang of the 23 years of debt depression has had lasting negative effects on the country’s strength and vibrancy that had characterized Japan prior to 1990 and many times throughout history.

Since 2013, extremely large debt monetization and fiscal deficit stimulus (5% of GDP deficits on average) and extremely large central bank buying of Japanese yen debt (the BoJ now holds government bonds worth >90% of GDP) took place, which pushed interest rates 0.9% below the nominal growth rate and 1% below the inflation rate on average, and depreciated the yen, all of which was very stimulative. The combined lower interest rates and currency depreciation led to Japanese government bonds being a terrible storehold of wealth, losing 45% relative to US bonds and 60% relative to gold. These and other actions provided an average interest rate that was about 2.2% below the US rate and depreciated the currency by an average rate of 5.5% per year in real terms versus USD. More specifically, since 2013, the cumulative return of a Japanese government bond relative to a US government bond was -45%, which is almost entirely attributable to currency depreciation, since the lower carry/accrual from Japanese bonds was entirely offset by price gains (roughly +20%) due to falling Japanese yields. At the same time, Japanese inflation averaged only 1.1% per year relative to US inflation of 2.7% per year because of domestic deflationary pressures. The principle “don’t own government bonds at such times” should resonate.

Let’s look at what happened more closely.

Since 2013, while there was modest inflation of 0.8% per year in average worker compensation in yen terms, the big yen depreciations, along with greater wage gains in other nations, made them more competitive. For example, there was a total decline of 58% in the cost of a Japanese worker relative to an American worker since 2013. Similarly, other domestic items in Japan fell a lot in cost relative to the costs in other countries. That helped to make Japan more competitive. These changes are shown in the charts below.



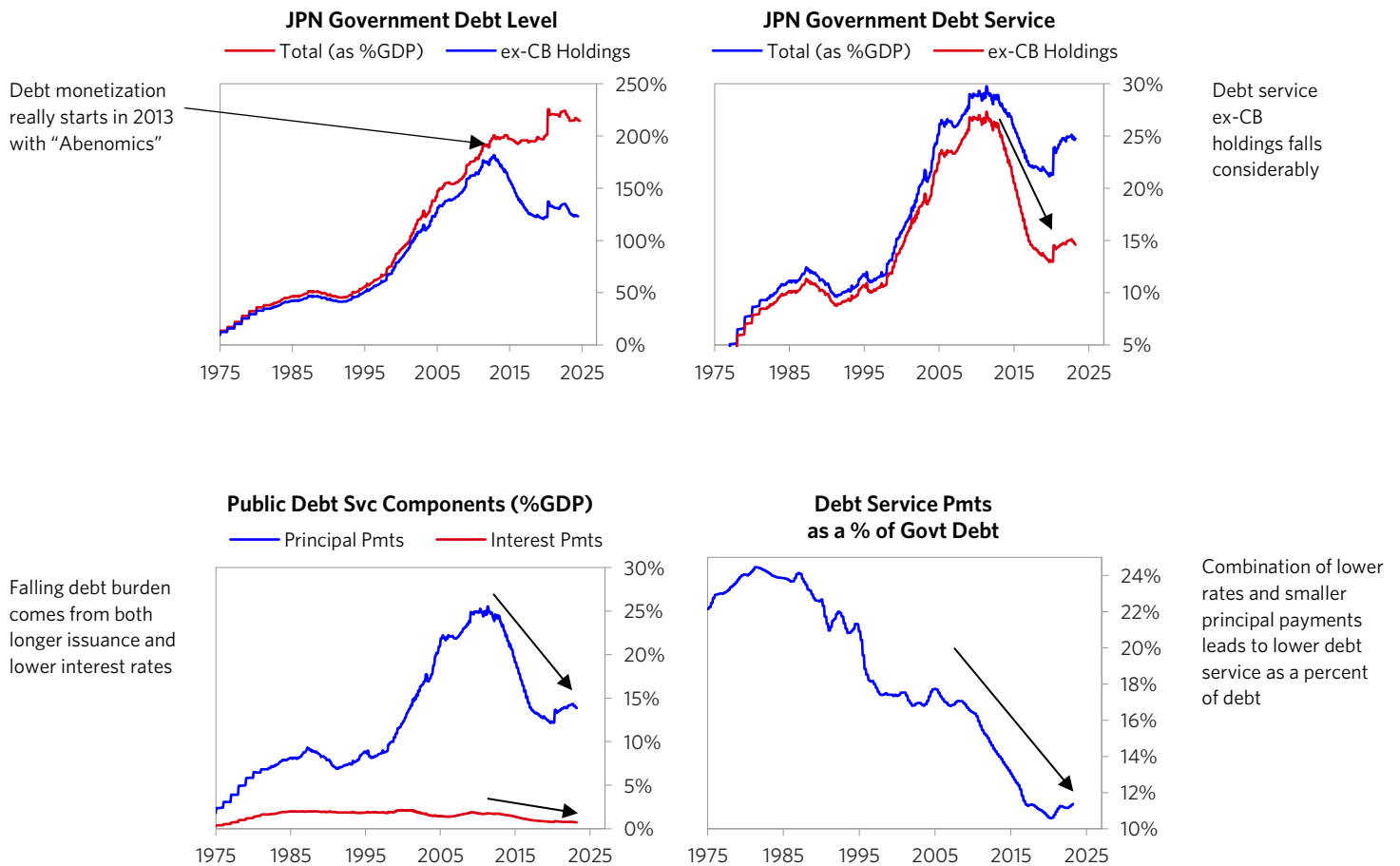
These low interest rates reduced debt service costs a lot—since 2013 Japanese interest debt service fell over 50% (and has fallen over 65% since 2001), making it much easier to service the debt.

Still, the Japanese debt during this period increased by almost 10%. To neutralize its effects, the Japanese central bank bought over half of all the government debt and absorbed the debt service costs, which it monetized. The declines in interest rates engineered by the BoJ also contributed to the debt relief (though more of that benefit occurred even before Governor Kuroda took the helm, as short rates had already hit zero).

### How JPN Managed Big Increases in Total Gov't Debt AND Big Declines in Interest Payments

	2001	2013 (Pre-QE)	Today	% Chg	
Govt Debt (%GDP)	99%	197%	215%	9%	Debt increased by ~10%...
ex-CB Holdings	93%	178%	123%	-31%	But the CB monetized enough to push ex-CB debt down 30%
Average Interest Rate on Govt Debt	2.3%	0.9%	0.6%	-40%	Meanwhile, average interest rates fell 40%
ex-CB Govt Interest Service (%GDP)	2.1%	1.7%	0.7%	-56%	and the interest Gov't pays to the public is down >50%

The following charts show these trends. The bottom left shows the substantial declines in the interest service actually paid by the government to the public, and the other charts show how you got there: through central bank purchases and large declines in interest and principal payments.



As a result, remarkably the massive increase in debt that occurred in this period was concurrent with an improvement in Japan's central government balance sheet. Net assets (government assets minus government liabilities) are now 20% better in dollar terms compared to 2013 because the Bank of Japan accumulated dollar reserves (primarily in the 2001-12 period) and Japan's debts as measured in dollars are not up as much due to the yen currency depreciation.

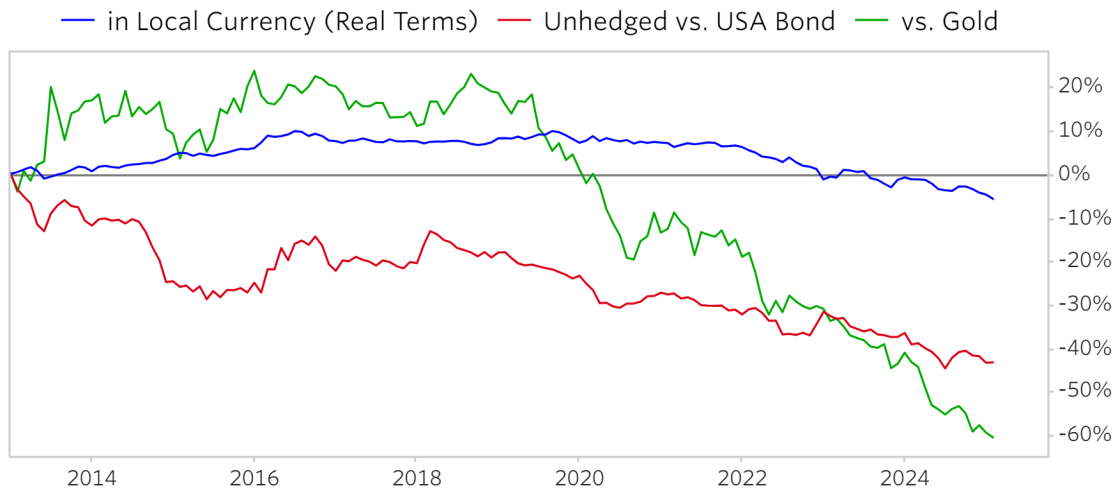
### How JPN Managed Big Increases in Gov't Debt AND Big Improvement in Balance Sheet

	2001	2013 (Pre-QE)	Today	Change (Since '01)	
Total Debt (%GDP)	99%	197%	215%	116%	Total gov debt more than doubled...
Debt ex-CB (%GDP)	93%	178%	123%	33%	...while debt held by public is only up 30%
Debt ex-CB (Yen, tril.)	504	893	748	49%	Up a lot in yen terms...
Debt ex-CB (USD, bil.)	4,322	9,734	4,650	8%	...but not as much in dollar terms
USD-JPY Spot	117	92	144	23%	
Reserves (USD, bil.)	358	1,371	1,408	293%	Reserves Up in Dollar Terms b/c of Accumulation
Assets (Reserves) - Liabilities (Debt)	-3,965	-8,363	-3,242	18%	
Assets - Liabilities %GDP	-85%	-153%	-76%	9%	Improvement of "Net Worth" of Gov't

**Who were the winners and who were the losers? Clearly the big losers were the Japanese debt holders including the Japanese central bank. The Japanese bond holders lost a total of 6% in real terms (as real yields were generally negative), 45% versus if they had instead held US bonds, and 60% relative to the old "hard money" of gold. Below is a chart of the real return of just holding JGBs as a Japanese investor (in local currency) and their performance relative to US bonds and gold.**

### JPN 10yr Bond Cumulative Returns

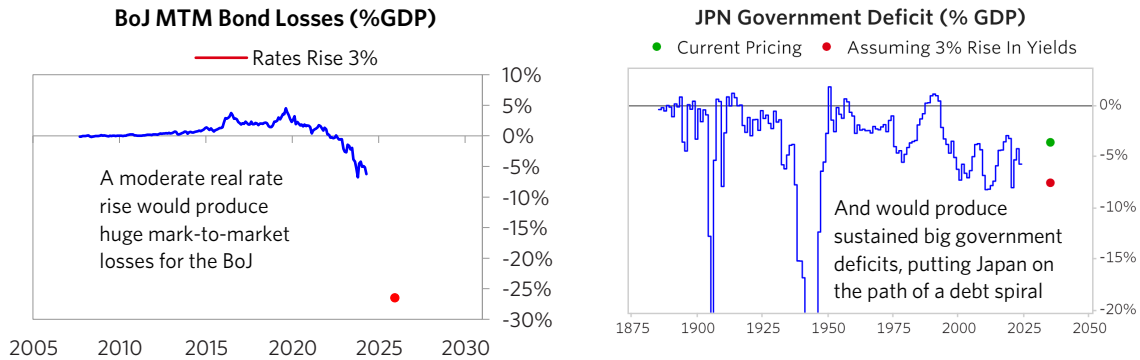
Since 2013



At the same time, there has been a big deterioration in the BoJ's balance sheet. These losses will be very large if Japanese real and nominal bond yields rise to more reasonable levels (e.g., 2% and 3% respectively).

- For example, if Japan had a 3% rise in real interest rates (from -0.3% to 2.7%):

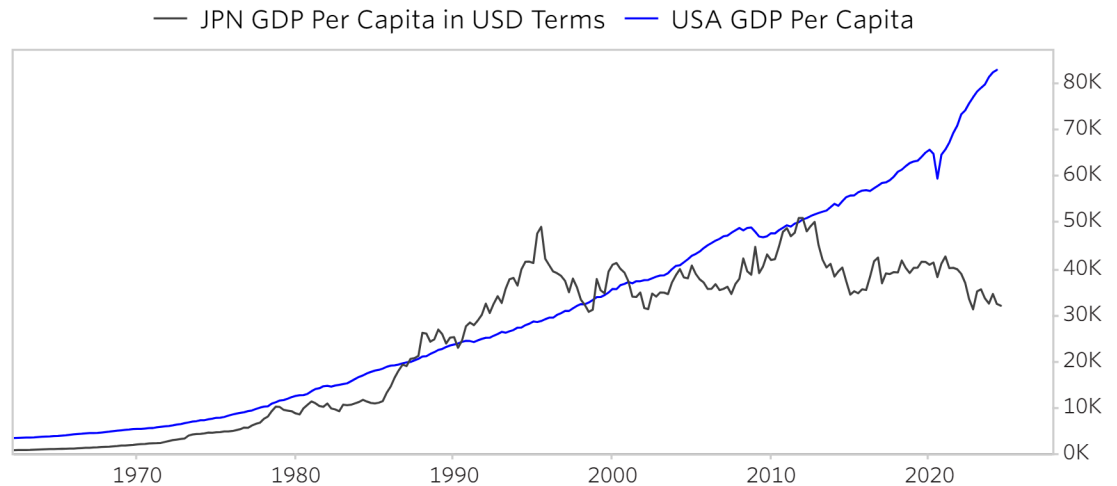
- **The BoJ would experience a 30% of GDP mark-to-market loss on its bond holdings and would be in a seriously negative cash flow situation of around -2.5% of GDP.**
- **The government would see the deficit widen from roughly 4% of GDP to around 8% of GDP over the next 10 years due to the increase in interest costs (not including any outlays to cover central bank losses).** The government debt level would surpass its post-WWII peak, rising from 220% to 300% over the next 20 years.



- **The combined cash flow need across the central bank and the government would be around 5-6% of GDP per year, which is huge.** That would have to be handled through debt issuance, money printing, and/or deficit reduction. If it was financed by central bank printing, this would be **the equivalent of another round of QE in terms of expansion of the money stock**, not including any additional printing needed to offset selling by the private sector.
- Resolving it would require even greater write-downs in debt and devaluations of the currency—with Japanese people becoming relatively poorer in the process—until Japan is competitive enough to begin a new cycle.

Key non-tradable goods—local wages, local services, local housing—have seen essentially no price increases in yen terms and significant deflation in global currency terms since 2000. The affordability of rent (rent compared to wages) has barely moved. This is despite tradable goods and commodities being way up because of the currency’s depreciation. A decent boxed meal bought at a convenience store used to take 10 minutes of work to afford, now it’s 16 minutes (up 60%+)—around a 2% inflation rate for that item (in wage terms). And Japanese workers are more competitive than ever.

That said, Japan has seen dramatically lower *dollar* incomes, meaning purchases on imports are much more expensive. Using the most apples-to-apples comparison (dollar GDP per capita), individuals in Japan used to be richer than US individuals, now they are some 60% poorer. This is obvious to any Japanese person traveling abroad.



**For a different angle of who the winners and losers were, it's helpful to take a look at how prices have changed in Japan at a very granular level because it provides a window into what it's like to earn, spend, and save there. The table below provides a lot of details, but to summarize:**

- Since 2000, the yen is down 30%. If you were a US investor who kept their money in yen versus dollars earning the dollar interest rate, you're down 84%.
  - Your returns for holding unhedged Japanese bonds versus US bonds were slightly better (but still very bad, down roughly 70%) and slightly better (but still very bad) for unhedged Japanese equities versus US equities (down around 67%).
- Meanwhile, prices in Japan (aggregate CPI) are up 10%—much less than in the US, where prices are up 90%.
- At the same time, all fiat currencies have devalued versus goods. The dollar has depreciated about 50% in the last 24 years.
- **Whereas total average inflation is similar across major categories, the composition of inflation is very different. In Japan, there has been deflation in non-tradables—housing and labor especially—while prices of tradable goods (i.e., things you can purchase from abroad like electronics, toys, oil, etc.) have soared with some key tradable commodities up 3x+ in yen terms.**
  - Non-tradables are about flat in price while tradable commodities are up 2-10x (average up 3x).

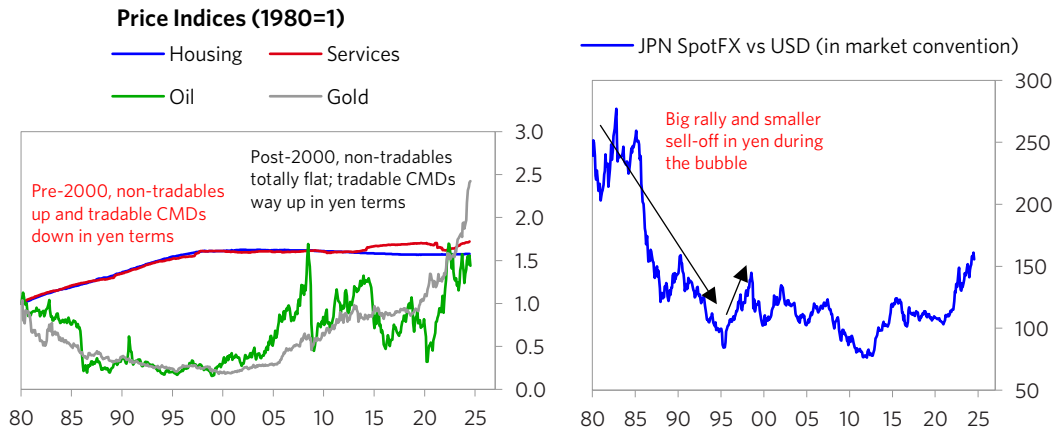
	<u>JPY</u>			<u>USD</u>		
	Price in 2000	Price Today	% Chg in FX Buying Power	Price in 2000	Price Today	% Chg in FX Buying Power
<b>FX vs USD</b>	107	156	-31%	-	-	-
<b>Aggregate CPI</b>	1.00	1.11	-10%	1	1.95	-49%
<b>Non-Tradables</b>						
Housing	1.00	0.98	2%	1	2.14	-53%
Services	1.00	1.07	-6%	1	2.08	-52%
<b>Tradables</b>						
<b>Goods (CPI Indices)</b>						
Food/Beverage	1	1.32	-24%	1	1.84	-46%
HH Durables	1	0.86	16%	1	1.16	-14%
Clothes/Footwear	1	1.14	-12%	1	1.04	-4%
<b>Commodities</b>						
Soybeans	52,318	174,594	-70%	488	1,122	-57%
Wheat	27,650	85,725	-68%	258	551	-53%
Oil	2,933	12,637	-77%	27	81	-66%
Natural Gas	288	328	-12%	3	2	28%
Coal	2,254	20,961	-89%	21	135	-84%
Aluminum	184,000	353,235	-48%	1,715	2,270	-24%
Copper	194,410	1,395,822	-86%	1,812	8,970	-80%
Lean Hogs	6,375	13,971	-54%	59	90	-34%
Live Cattle	7,390	30,137	-75%	69	194	-64%
Gold	30,436	377,104	-92%	284	2,423	-88%
Silver	568	4,561	-88%	5	29	-82%
<b>Avg of CMDs</b>	1	3.2	-69%	1	2.23	-55%

Return of Holding Yen in a Bank, Converting at End:

-29%

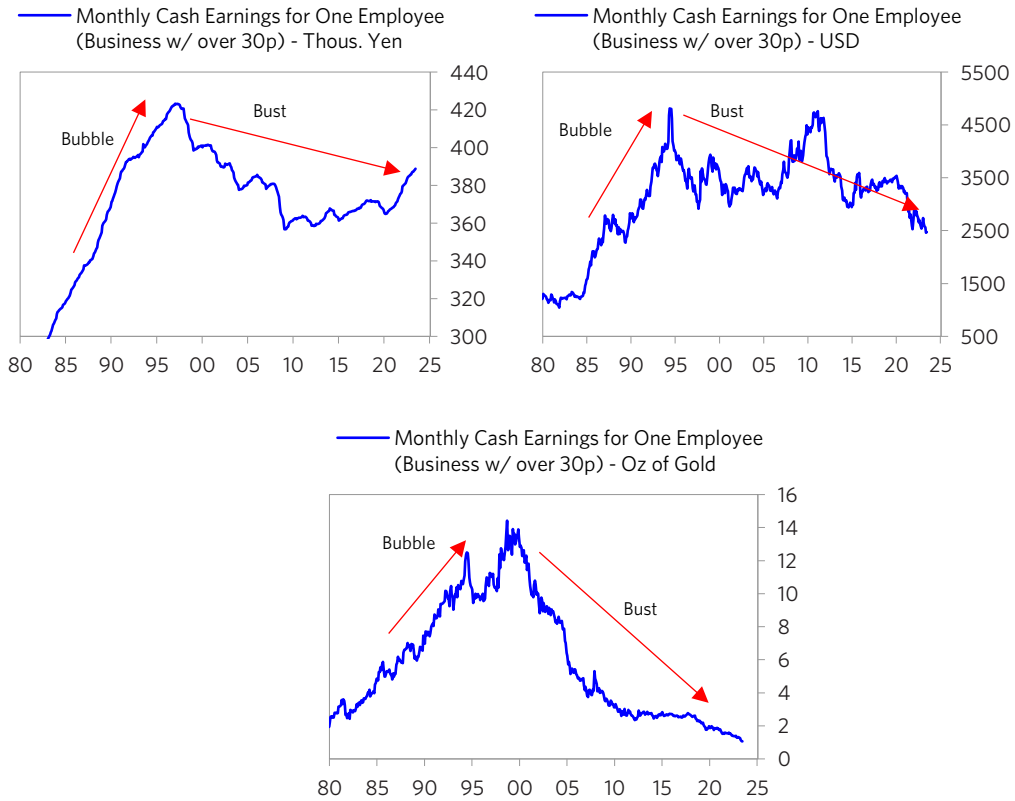
Return of Holding Yen Financed with Borrowed USD, Converting at End:

-84%

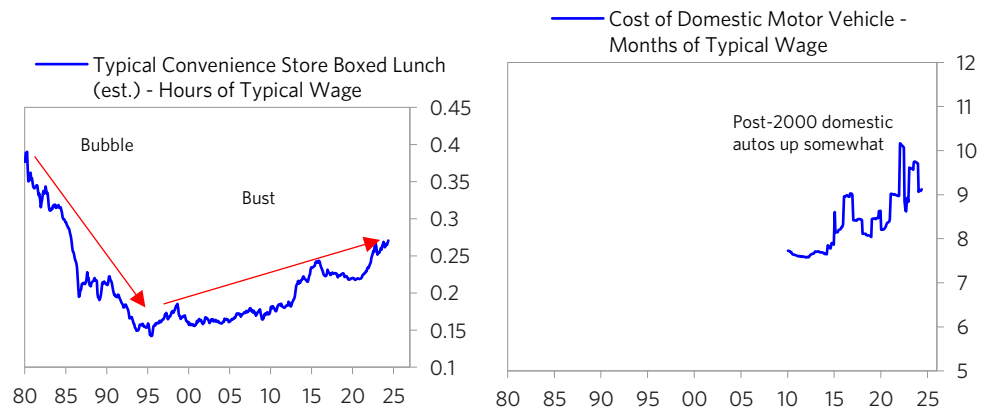


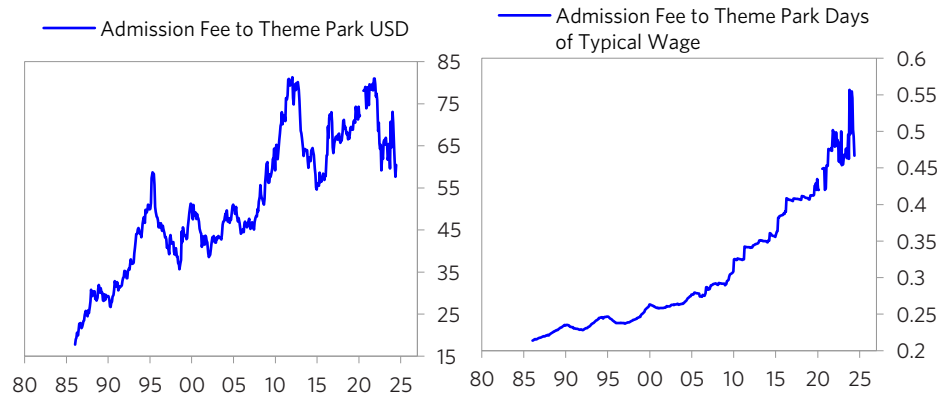
- All of this is largely the inverse of what happened in the lead-up to the bubble (1980-90), where overheating growth and strong capital inflows led to both significant non-tradables inflation (+40%) and yen strength (+70%). These changes reflect the changes in the big cycle in Japan.

The following charts convey the picture for a Japanese worker. As shown, in the past 25 years, typical worker wages were relatively flat in yen terms, just shy of 400,000 yen a month, but fell significantly in dollar and world currency terms. In other words, while the average Japanese worker used to make the equivalent of \$3,500 a month, they now make about \$2,500. In gold terms, they used to earn 13 ounces of gold equivalent a month; now it's 1 ounce.



You can also see the impact by looking at some real prices of items that mix commodities with heavy doses of domestic labor. The data on costs of vehicles tends to wiggle a lot, but roughly speaking a domestically made car used to cost eight months of labor, and now it's nine months. A convenience store boxed lunch used to take 10 minutes of work to afford, now it's 16 minutes (up 60%+). Going to a theme park used to cost a third of a day of labor, now it's a half a day.





The charts reflect the dramatic changes that took place and are likely to continue to take place due to the previously described typical mechanical process of the Big Debt Cycle in which the country has a lot of debt denominated in its own currency and it is a reserve currency country.

Remarkably during this period, there were no really big internal or external conflicts, though Japan is now preparing for war with China (though it doesn't want it) as the United States' most important ally in the region.

## How Did Japan Get Here?

I want to highlight six dynamics at play in Japan that helped bring about these sets of winners and losers. Here is what happened:

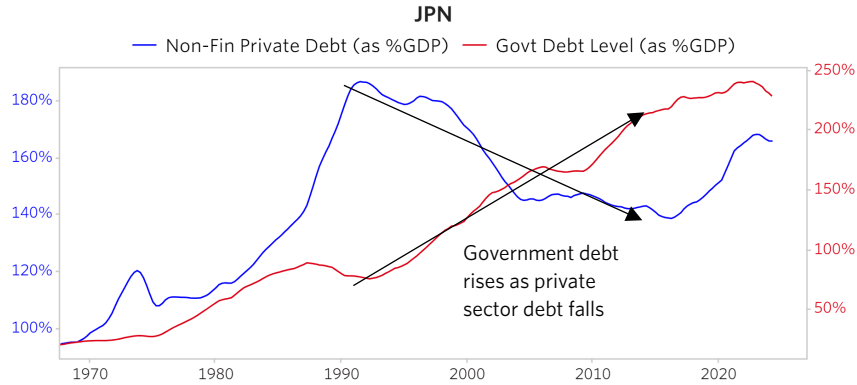
1. The government deficit spending floods the private sector with cash, aiding in private sector deleveraging.
2. The central bank monetizes the debt to keep long rates low, lower debt service, and boost demand. Government debt burden ex-CB holdings begins to fall as a percent of GDP.
3. And the resulting currency depreciation acts as a sort of tax on foreign investors holding unhedged domestic bonds and domestic investors who didn't invest outside the country, while it lowers the government debt burden as that falls in value when measured in foreign FX and gold.
4. Domestic savers are similarly taxed, though to a lesser degree because even, though their buying power abroad decreases, that fall in buying power isn't as much domestically.
5. The country gets more competitive, as both assets and factors of production get cheaper.

More specifically it happened in the following way.

### **Dynamic 1: Public sector deficit spending floods private sector with cash, helping the private sector delever.**

The following chart shows that dynamic, with public sector debt rising from roughly 1990 to 2020, during the period of private sector deleveraging. After that government leveraging, Japan was left with the highest government debt levels of any major country. There are many historical cases of other governments struggling to deal with their debt burdens. Japan was able to manage it because of the second dynamic.





**Dynamic 2: The central bank monetizes the debt to keep long rates low, lower debt service, and boost demand. Government debt burden ex-CB holdings begins to fall as a percent of GDP.**

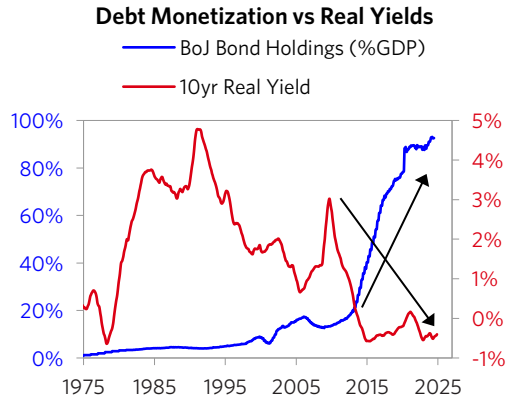
The following table shows how Japan’s debt service (interest and principal repayment) in yen effectively fell by around 7% during a period in which debts rose by nearly 30%. About half of that was because of lower interest rates (shown in the chart further below) and debt being termed out. The other half was because of BoJ purchases of the debt.

**JPN Change in Public Debt Service as %GDP Since 2013**

Metric	Contribution	Level (2013)	Level (2023)
<b>Δ in Debt Service as %GDP</b>	<b>-11%</b>	<b>26%</b>	<b>15%</b>
<b>Δ in Debt Service (Yen)</b>	<b>-7%</b>	<b>128 tril.</b>	<b>85 tril.</b>
Δ in ex-CB Govt Debt	-3%	898 tril.	748 tril.
Δ in Total Govt Debt	-6%	997 tril.	1270 tril.
Δ in CB Holdings	9%	99 tril.	522 tril.
Δ in Debt Service as % Govt Debt	-4%	14%	11%
Δ in Avg Interest Rate	-1%	0.9%	0.6%
Δ in Principal Payments	-4%	13%	11%
<b>Δ in GDP (Yen)</b>	<b>-4%</b>	<b>497 tril.</b>	<b>583 tril.</b>
Δ in Price Level	-2%	---	---
Δ in Real GDP	-2%	---	---

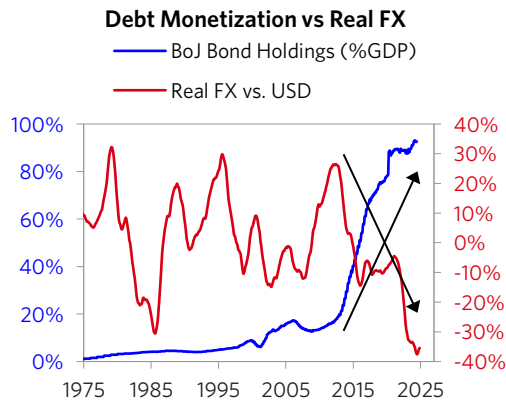
Lower interest rate and longer-maturity issuance helped decrease debt service costs

Expansion of CB balance sheet largely offset additional government debt



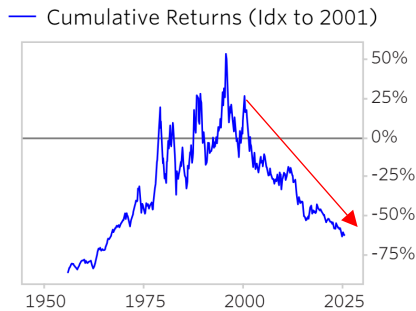
**Dynamic 3: And the resulting currency depreciation acts as a sort of tax on foreign investors holding unhedged domestic bonds and lowers the government debt burden in foreign FX and gold.**

BoJ actions significantly contributed to declines in the yen, as shown in the chart below.

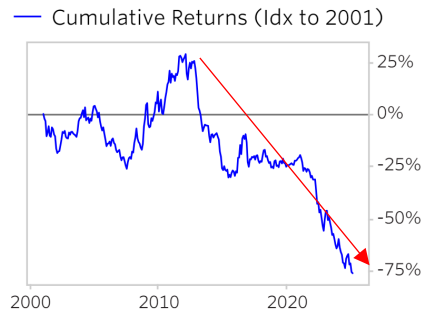


This meant that holders of yen-denominated assets saw their holdings lose a significant amount of value. The charts below compare the returns of yen bonds to USD bonds, and yen currency to USD currency. In both cases, holders of yen lost more than half of the value. This is not dissimilar to a default.

**JPN vs USA Unhedged Bond Diff**

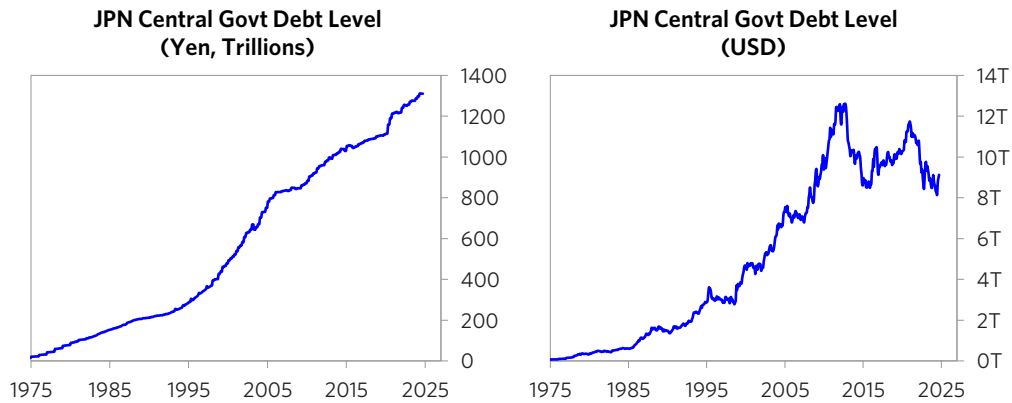


**JPN vs USA FX Returns**



Unhedged JPN bond returns in USD were also poor, as falling JPN yields couldn't offset a depreciating yen and US inflation

This also has produced a deleveraging of Japanese government debt as measured in other currencies. Measured in dollars, debt service is down since 2001, a period with rapid government borrowing. Measured in gold, debt levels are down some 80%.



### JPN Change in Publicly Held Debt in USD and Gold

Metric	% Change Since 2001	Level (2001)	Level (2023)
Δ in Total Debt (USD)	30%	4.3 tril.	5.6 tril.
o/w Δ in Debt (Yen)	48%	504 tril.	748 tril.
o/w Δ in Spot vs USD	-12%	117	133
Δ in Debt Service (USD)	-16%	0.8 tril.	0.6 tril.
o/w Δ in Debt Service (Yen)	-4%	88	85
o/w Δ in Spot vs USD	-12%	117	133
Δ Total Debt (Gold)	-82%	16 bil.	3 bil.
o/w Δ in Debt (Yen)	48%	504 tril.	748 tril.
o/w Δ in Spot vs Gold	-88%	31 thous.	262 thous.

Debt and debt service in foreign FX and gold falls

\*Sub-components for each category are multiplicative i.e. sum geometrically

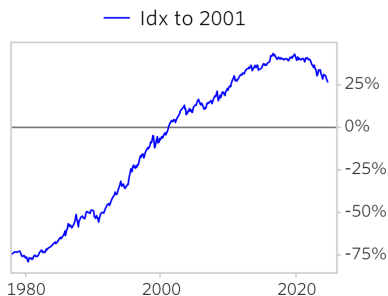
### Dynamic 4: Domestic savers are similarly taxed, though to a lesser degree because, even though their buying power abroad decreases, it's not as bad domestically.

We'll look at this point through two lenses:

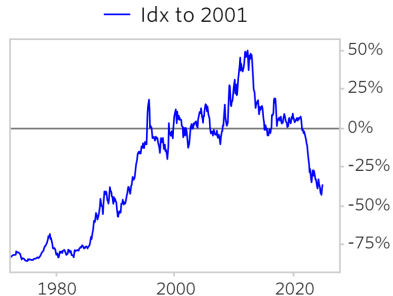
- Holders of Japanese government debt without the currency exposure have done OK, even while the assets have done quite badly in USD terms.

JPN hedged bond returns have been decent since 2001, with a notable worsening since COVID-era inflation

**JPN 10Yr Cumulative Real Return**



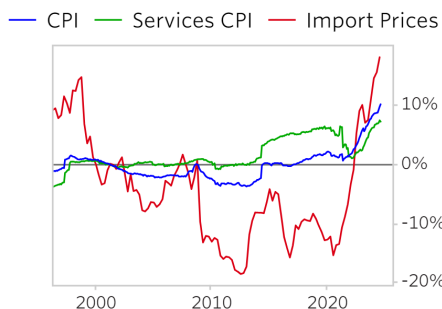
**JPN 10Yr Real Returns in USD**



However, JPN bond returns have been very poor in USD terms, especially since 2013

- Japanese households have seen muted inflation over the period (discussed in more depth above). The weak economy has kept the currency declines from translating into much domestic inflation.

**JPN Prices (Idx to 2001)**



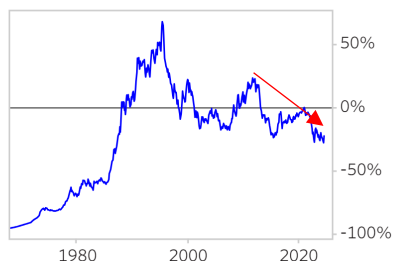
Import prices rose as the yen devalued, but that was offset by low domestic price growth (like services CPI)

Tradables/imports rose in price; domestic goods stayed steady, keeping a lid on domestic inflation

**Dynamic 5: The country gets more competitive, as both assets and factors of production get cheaper.**

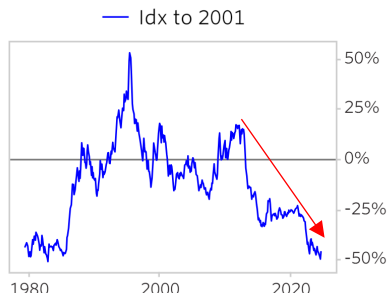
In the following charts, note how just about everything in Japan became much cheaper and how that attracted FDI inflows.

**JPN Home Prices in USD (Idx to 2001)**



Home prices in USD have fallen considerably...

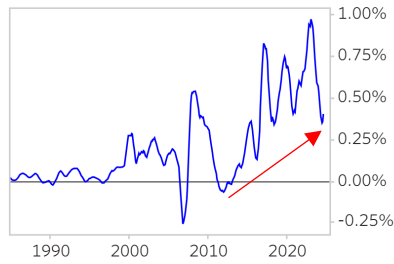
**JPN Prod-Adj. Wages in USD**



...as have wages

### JPN FDI Inflows

— as %GDP

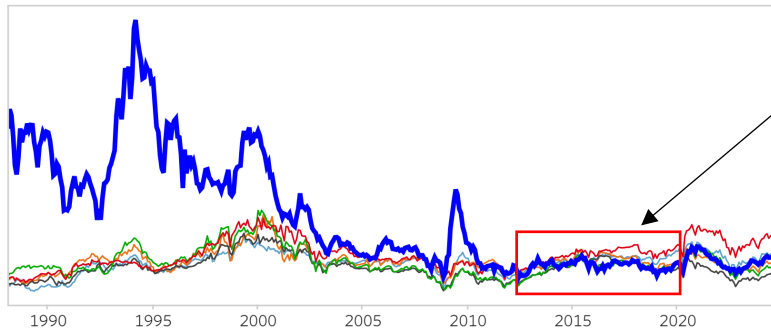


While still low in level terms, FDI has increased since 2013, consistent with JPN getting more competitive

Asset valuations have mirrored this as well. Japan went from one of the more overvalued markets (at least as measured by imperfect statistics like P/Es) to inexpensive relative to the US.

### Fwd P/E

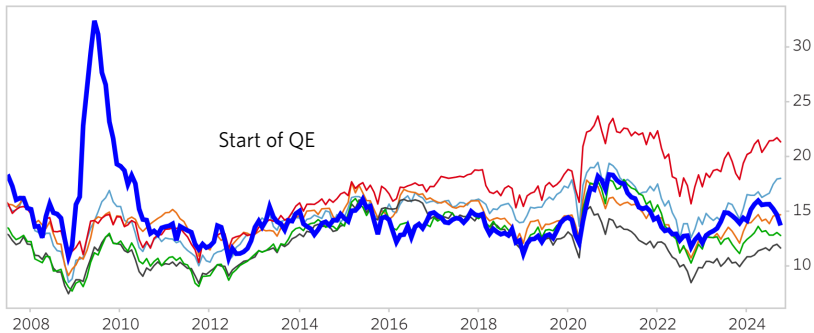
— JPN — USA — EUR — GBR — CAN — AUS



Starting in 2013, equities began cheapening relative to other developed countries, but that has started to reverse in the past few years

### Fwd P/E (More Recent History)

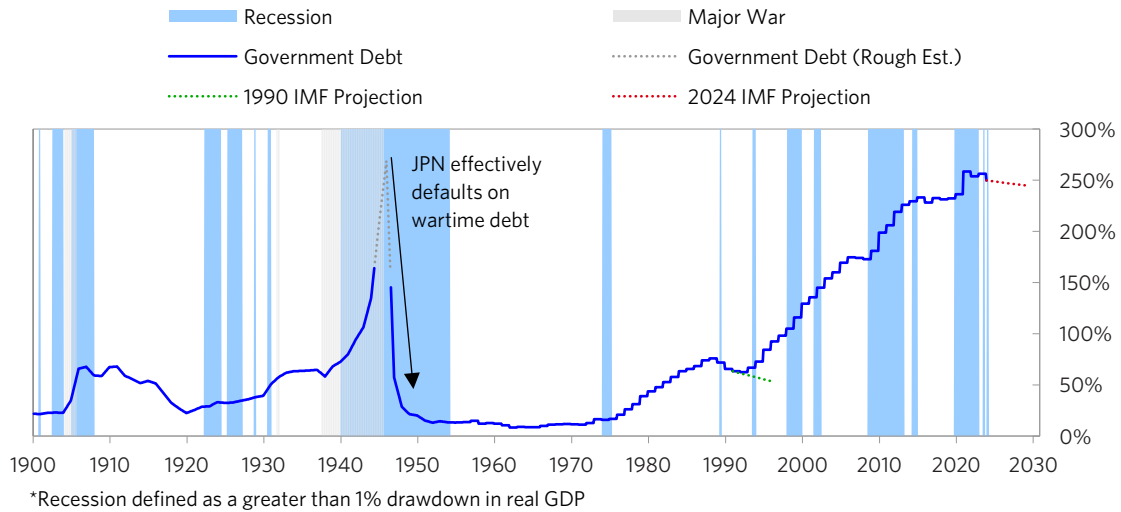
— JPN — USA — EUR — GBR — CAN — AUS



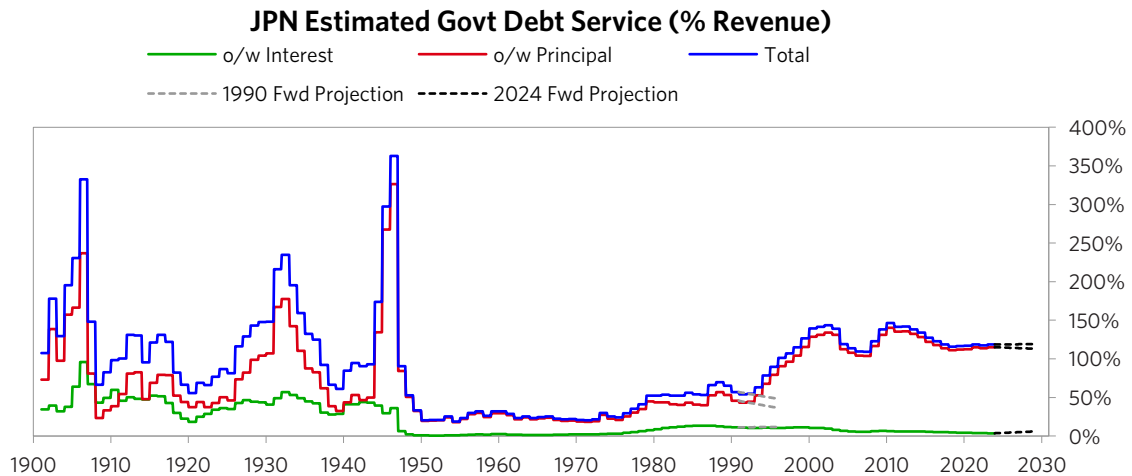
## Japan's Big Debt Cycle in Some Charts

As with China, we'll end this chapter with charts that are more zoomed out, which helps show the big cycle transpiring over many decades.

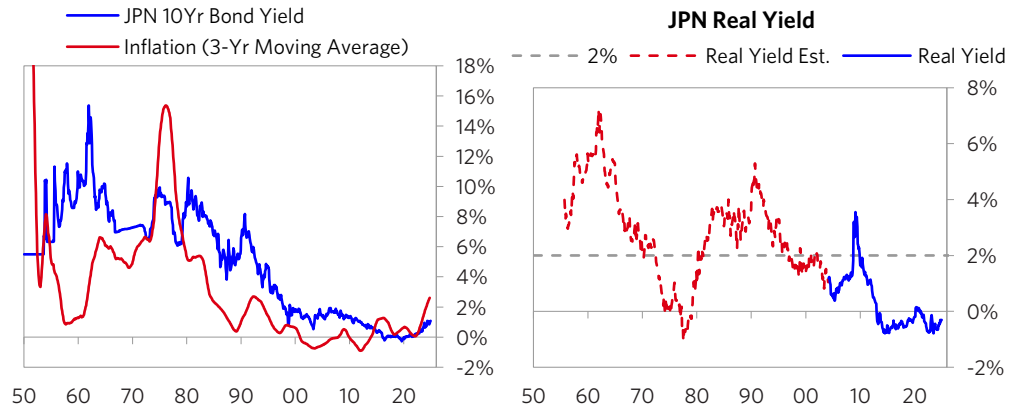
The first chart below shows Japan's Big Debt Cycle in the form of the government's debt-to-GDP ratio going back to 1870; that way you can see two big cycles, though we will focus on the second.



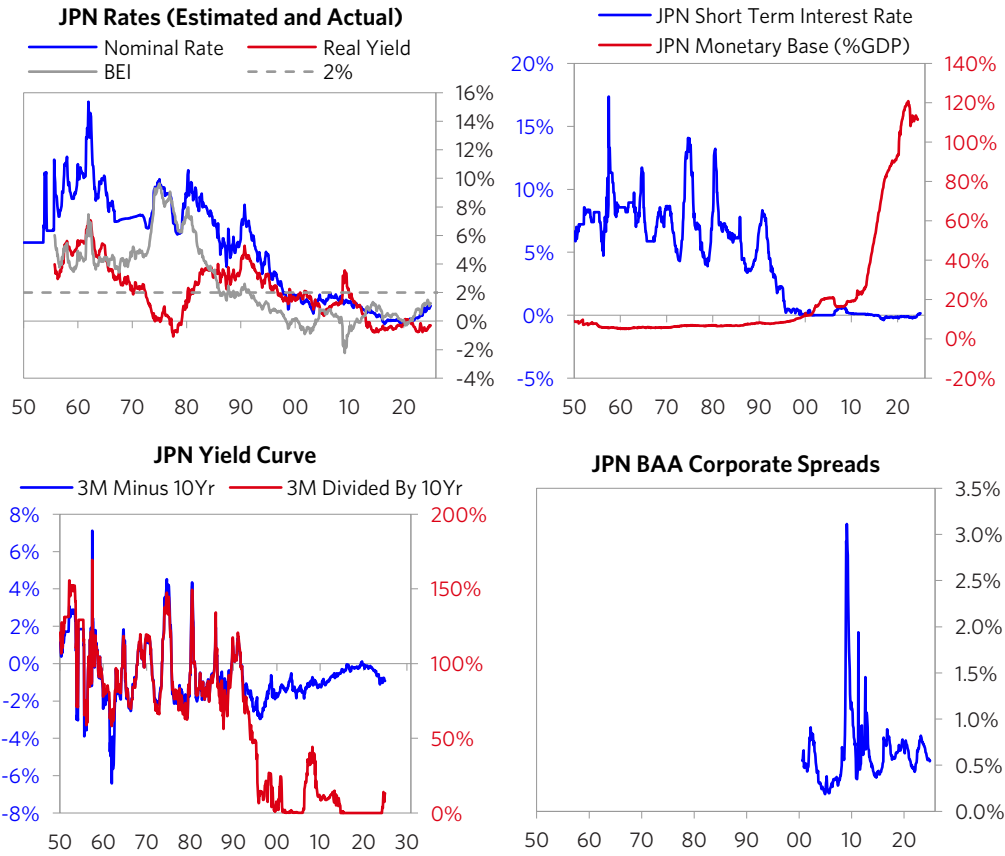
The next chart shows the amount of central government debt service as a percent of the amount of revenue the government took in. In it you can see the debt busts that happened when it exceeded 150%, and you can see how, in recent years, it has risen toward—but stayed below—150%.



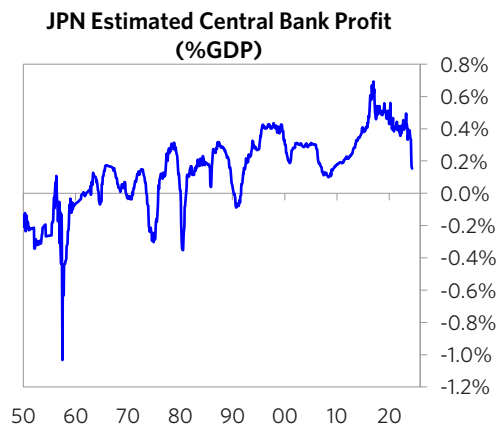
I will now shift to a post-1950 perspective. Through these charts, you can see how the last couple decades are best characterized by “pushing on a string,” with nominal rates falling below 0%, real rates a bit negative<sup>17</sup>, large amounts of money printing, and the yield curve just slightly upward-sloping. Corporate spreads have stayed low (for perspective, as of this writing they are around 1% in the US and 0.6% in Japan for Baa-rated companies). All of these are characteristics of very stimulative monetary policy, especially in the last decade or so. Despite the stimulative policy, inflation has remained much lower than policy makers have generally desired, slipping in and out of deflation.



<sup>17</sup> On the chart below, I am showing real yields since the creation of the Japanese inflation-linked bond market. Prior to this, I am showing an estimate of real yields based on nominal yields and an estimate of market 10-year inflation expectations.



The highly stimulative policy comes with risks. So far, the BoJ has remained profitable: the bonds they've bought (with printed money) haven't seen big sell-offs, and the interest they've had to pay on excess reserves has remained quite low (because of low short-term interest rates). But if rates rise, the BoJ will become significantly unprofitable, fast. That recently happened to the US Federal Reserve, producing moderate manageable losses—up to 0.5% GDP. But with the BoJ's monetary base at around 5x the Fed's, losses could be much more meaningful.





## Note: My Failure to Cover a Lot

While it might seem like I covered a lot in this review of the period since 1945, what I left out was vastly greater than what I included. While I briefly looked at what happened in the United States, China, and Japan, I showed virtually nothing of what happened in the other great developed powers (e.g., European powers), Middle Eastern countries, and I barely mentioned most emerging countries, also known as the “Global South” (e.g., India, Africa, Latin America, Asia, and Oceania), which account for 85% of the world’s population. They all had and are having their Big Cycles. I am excited to say that with AI I am beginning to get my head around it all, and I have reason to believe that my digital self will evolve way beyond me to deal with these and communicate with you about them. (By the way, if you are interested in communicating with my digital self, you can get Digital Ray [here](#).)

Of the many countries I haven’t been able to mention, it is worth taking a moment to focus on rising countries with strong fundamentals (as reflected in my strength gauge that consists of 18 measures), like India; ASEAN countries such as Singapore, Indonesia, and Vietnam; the UAE; and Saudi Arabia, which have benefited by being neutral vis-à-vis the power conflicts. A number of them are at take-off points in their developmental cycles because their people, governance systems, and capital markets are approaching being capable of competing in ways that didn’t previously exist. Also, the conflicts between the United States and China are making the United States and China less desirable, which is driving capital, businesses, and talented individuals to these places. If you want to look at them more closely, I recommend that you look at my Great Powers Indices that summarizes the conditions and prospects of the top 24 countries. They are available for free [here](#).



